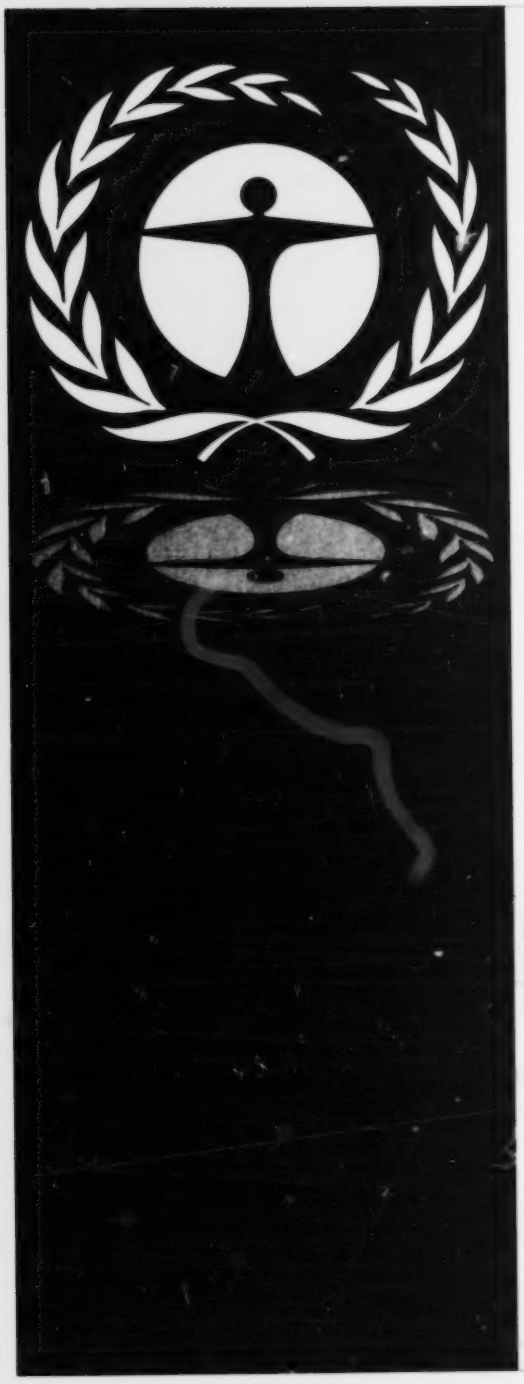
UNEP

United Nations Environment Programme

1991 ANNUAL REPORT

of the Executive Director

NAIROBI, 1992



United Nations Environment Programme

ANNUAL REPORT 1991

of the Executive Director

Nairobi, 1992

ANNUAL REPORT 1991

Printed by United Nations Environment Programme
P.O. Box 30552 Nairobi Kenya

ISBN 92 807 1318-3 ISSN 1010-1268

READEX
FICHE

CONTENTS

		Page
Abbreviations		v
Chapter I	THE YEAR IN RETROSPECT	1
Chapter II	THE COORDINATING AND CATALYTIC ROLE OF UNEP	7
Chapter III	THE ENVIRONMENT PROGRAMME	25
Chapter IV	INTERGOVERNMENTAL LEGISLATION OF RELEVANCE TO UNEP	107
Chapter V	FINANCIAL AND ADMINISTRATIVE MATTERS	141
Annex I	Member States of the UNEP Governing Council	155
Annex II	Distribution of UNEP staff in the Professional Category and Above by Region, Nationality and Level as at 31 December 1991	157
Annex III	Trust Funds and other Funds	
	1. Status and actions taken in 1991	161
	2. Financial status of Trust Funds and other Funds as at 31 December 1991	173
Annex IV	Environment Fund Tables	181
Annex V	Implementation of UNEP Programme 1990-1991	189

ABBREVIATIONS

ACC	Administrative Committee on Coordination
ACMAD	African Centre of Meteorological Applications for Development
ACTS	African Centre for Technology Studies
ADALCO	Deserts and Arid Lands Committee (AMCEN)
AfDB	African Development Bank
AMCEN	African Ministerial Conference on the Environment
AsDB	Asian Development Bank
ASEAN	Association of South-East Asian Nations
AVHRR	Advanced very-high resolution radiometer
BAPMoN	Background Air Pollution Monitoring Network
CEC	Commission of the European Communities
CIDA	Canadian International Development Agency
CIDIE	Committee of International Development Institutions on the Environment
CILLS	Permanent Interstate Committee on Drought Control in the Sahelian Zone
CIP	Centre for International Projects, Moscow
DANIDA	Danish International Development Agency
DESCON	Consultative Group for Desertification Control
DOEM	Designated Officials for Environmental Matters
ECA	Economic Commission for Africa
ECDIN	Environmental Chemicals Data and Information Network
ECG	Ecosystems Conservation Group
ECLAC	Economic Commission for Latin America and the Caribbean
ECOWAS	Economic Community of West African States
ECPR	European Centre for Pollution Research
EIB	European Investment Bank
ELCI	Environment Liaison Centre International
EMINWA	Programme for the Environmentally Sound Management of Inland Waters
ESCAP	Economic and Social Commission for Asia and the Pacific
ESCWA	Economic and Social Commission for Western Asia
FAO	Food and Agriculture Organization of the United Nations
FCCC	Framework Convention on Climate Change
FINNIDA	Finnish International Development Agency
GCOS	Global Climate Observing System
GEF	Global Environment Facility

GERMON	Global Environment Radiation Monitoring Network
GIS	geographic information system
GLASOD	Global Assessment on Soil Degradation
GOOS	Global Ozone Observing System
HEM	Harmonization of Environmental Measurements
IADIZA	Instituto Argentino de Investigaciones de las Zonas Aridas
IAWGD	Inter-Agency Working Group on Desertification
IBPGR	International Board for Plant Genetic Resources
ICGEB	International Centre for Genetic Engineering and Biotechnology (UNIDO)
ICIMOD	International Centre for Integrated Mountain Development
ICIPE	International Centre of Insect Physiology and Ecology
ICPEMC	International Commission for Protection Against Environmental Mutagens and Carcinogens
ICPIC	International Cleaner Production Information Clearing-house
ICRAF	International Council for Research in Agroforestry
ICSTI	International Centre for Scientific and Technical Information
ICSU	International Council of Scientific Unions
IDEAL	International Decade on East African Lakes
IDNDR	International Decade for Natural Disaster Reduction
IDRC	International Development Research Centre
IEEP	International Environmental Education Programme
IFAD	International Fund for Agricultural Development
IGADD	Inter-Governmental Authority on Drought and Development
IGBP	International Geosphere Biosphere Programme
IGO	Intergovernmental Organization
IIASA	International Institute for Applied Systems Analysis
ILEC	International Lake Environment Committee
ILO	International Labour Organisation
ILPES	Latin American and Caribbean Institute on Economic and Social Planning
IMO	International Maritime Organization
INC	Intergovernmental Negotiating Committee
INSTRAW	International Research and Training Institute for the Advancement of Women
IOC	Intergovernmental Oceanographic Commission
IPCC	Intergovernmental Panel on Climate Change
IPCS	International Programme on Chemical Safety
IPIECA	International Petroleum Industry Environmental Conservation Association
IRENA	Instituto Nicaraguense de Recursos Naturales

ISCG	Inter-agency Consultative Support Group
ISRIC	International Soil Reference and Information Centre
ISSS	International Society of Soil Science
ISWA	International Solid Waste and Public Cleansing Association
IUCN	World Conservation Union
IUFRO	International Union of Forestry Research Organizations
IWRA	International Water Resources Association
MARC	Monitoring and Assessment Research Centre
MEPA	Meteorological and Environmental Protection Agency (Saudi Arabia)
MIRCENs	Microbiological Resources Centres
MSDN	International Microbial Strain Data Network
NASREC	National Soil Reference Collections
NGLS	United Nations Non-Governmental Liaison Service
NIB	Nordic Investment Bank
NOAA	National Oceanic and Atmospheric Administration
NORAD	Norwegian Agency for International Development
NPACD	National Plan of Action to Combat Desertification (Yemen)
NSP	National Soils Policies
OAS	Organization of American States
OAU	Organization of African Unity
OECD	Organisation for Economic Cooperation and Development
ONEB	Office of the National Environment Board, Thailand
ONERN	National Office for Natural Resources Evaluation (Peru)
PACD	Plan of Action to Combat Desertification
PEEM	Panel of Experts on Environmental Management for Vector Control
PIC	Prior Informed Consent
ROPME	Regional Organization for the Protection of the Marine Environment
SACEP	South Asia Cooperative Environment Programme
SADCC	Southern African Development Corporation Conference
SCOPE	Scientific Committee on Problems of the Environment
SOTER	World Soil and Terrain Digital Database
SPREP	South Pacific Regional Environment Programme
STAP	Scientific and Technical Advisory Panel
SWMTEP	System-wide medium-term Environment Programme
TFAP	Tropical Forestry Action Plan
TREES	Tropical Ecosystem Environment Observation by Satellite
TVE	Television Trust for Environment
UNCED	United Nations Conference on Environment and Development

UNDRO	Office of the United Nations Disaster Relief Coordinator
UNDTCD	United Nations Department of Technical Cooperation for Development
UNEPCOM	USSR Commission for UNEP
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFPA	United Nations Population Fund
UNIC	United Nations Information Centre
UNIDIR	United Nations Institute for Disarmament Research
UNITAR	United Nations Institute for Training and Research
UNSO	United Nations Sudano-Sahelian Office
USAID	United States Agency for International Development
WCIRP	World Climate Impact Assessment and Response Strategy Programme
WCMC	World Conservation Monitoring Centre
WCP	World Climate Programme
WDC	World Data Centre on Micro-organisms
WFP	World Food Programme
WICEM	World Industry Conference on Environmental Management
WRI	World Resources Institute
WTO	World Tourism Organization
WWF	World Wildlife Fund

CHAPTER I

THE YEAR IN RETROSPECT

THE YEAR IN RETROSPECT

1. The year 1991 was one of the most difficult, the most demanding, and yet one of the most exhilarating in UNEP's relatively short history. It was in many respects business as usual: we had to get on with the task of completing the implementation of our 1990-1991 biennial programme approved by the Governing Council in 1989. We had a job to do, and we did it. But over and above this routine responsibility was the more challenging task of preparing and laying a solid foundation for the future. The biggest event, just over the horizon, was the United Nations Conference on Environment and Development (UNCED), scheduled for Rio de Janeiro in June 1992.

2. Ever since its inception, UNEP had promulgated the concept of sustainable development. Sometimes we used other phrases - "eco-development", "development without destruction", "ensuring the sustainability of development" - but the concept itself never varied and our goal remained fixed. Naturally then, from the very start, we took a very keen interest in the Conference and its preparatory process. The fact that the General Assembly decided that UNCED should meet around the twentieth anniversary of the Stockholm Conference which created UNEP gave us an added feeling of responsibility. In the face of a global economic recession, the dissolution of the Union of Soviet Socialist Republics, armed intervention in the Iraq/Kuwait conflict authorized by the United Nations Security Council and signs of imminent major drought in Africa - issues which tended to divert attention from the environmental priority - we worked as never before to ensure that the concept of sustainable development, which is basic to the protection, preservation and enhancement of our human environment, was put squarely before the leaders and peoples of the world at Rio.

3. A striking example of UNEP's focus during 1991 on preparations for UNCED was the sixteenth regular session of the Governing Council, held at Nairobi from 20 to 31 May 1991. Almost one third of the decisions adopted by the Council at that session referred to UNCED and/or its preparatory process. By its decision 16/3, the Council even decided to hold a special three-day session in February 1992 to review three major inputs into the Conference: first, a synthesis report reviewing the changing state of the environment during the 20 years between the Stockholm and Rio conferences; second, a comprehensive report on the Plan of Action to Combat Desertification, including an evaluation of the validity of the Plan itself, a progress report on the implementation of the Plan, a report on the current status of global desertification, and studies on how the Plan can be financed; and third, the Secretary-General's comprehensive report on follow-up to General Assembly resolutions 42/186 and 42/187 concerning the Environmental Perspective to the Year 2000 and Beyond and the report of the World Commission on Environment and Development.

4. In 1991, over $3 million of UNEP's budget were devoted directly to preparations

READEX
FICHE

for UNCED, an indication of the amount and intensity of UNEP's participation in the preparatory process. Throughout the year UNEP prepared papers for, and took part in, the second (March/April) and third (August/September) sessions of the UNCED Preparatory Committee (PrepCom), as well as in numerous PrepCom-related working groups. Additionally, at the behest of the Governing Council, UNEP added three more meetings of experts to its already overloaded calendar[1] to contribute to the UNCED preparatory process: one to consider draft elements and an international action programme for the environmentally sound management of hazardous wastes; another to formulate a draft strategy on the control of marine pollution from land-based sources; and a third to discuss draft proposals for an intergovernmental mechanism for chemical risk assessment and management. The reports of these meetings - all of which were held in December - were transmitted to the UNCED secretariat for submission to the PrepCom at its fourth session. Yet, all the above-mentioned "extracurricular" activities and the $3 million devoted directly to the UNCED preparatory process represented only a small portion of UNEP's input into the Conference. Many of our ongoing activities in such areas as soils, water, desertification, climate, marine pollution, hazardous wastes, and dangerous chemicals dovetailed with areas of specific concern to UNCED, and we put our accumulated experience and expertise at the disposal of the UNCED secretariat.

5. One of our major tasks during 1991 and with a view to UNCED was the preparation of a comprehensive report on the state of the environment, analysing changes in the state of the world environment in the two decades since Stockholm. The magnitude of the task made it impossible to schedule production of the full report until the latter part of 1992 but, by the end of 1991, drawing on the material we had compiled and analysed, we were able to put together an abbreviated version of 200 pages[2] for submission, after review by the Governing Council, to the Conference. This is perhaps one of UNEP's most important inputs to the Conference, for it gives a perspective showing not only how far we have come, but how far we have yet to go.

6. Of course, 1991 was not a year of preparation for, and anticipation of, UNCED alone. A tremendous amount of work and time were devoted to the preparation of a global convention on biological diversity in anticipation of "having the convention ready for signature at the United Nations Conference on Environment and Development", as requested by the Governing Council.[3] No less than four sessions of the Ad Hoc Working Group/Intergovernmental Negotiating Committee were held during the year, sessions that required intense preparation and long hours of negotiations. At the year's end, there was reason to believe that our efforts would be rewarded by a global convention in 1992.

7. Throughout the year UNEP, as the interim secretariat for the 1989 Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, continued its follow-up activities to the Convention and its resolutions. By the end of the year, the Convention had been signed by 52 States and EEC, and 15 countries had ratified or acceded to it. As the Convention is to enter into force 90 days after the twentieth instrument of ratification or accession has been deposited, UNEP is optimistic the Convention adopted in 1989 will enter into force sometime in 1992. In the mean while,

the interim secretariat provided technical assistance to several developing countries to help them to be able to implement the provisions of the Convention. Additionally, a working group established by UNEP developed elements for possible inclusion in a protocol on liability and compensation. This question - and many more - will be taken up at the first meeting of the Conference of the Parties to the Basel Convention, once the Convention enters into force.

8. During 1991, the international community was also working feverishly on the text of an international convention on climate change, an initiative of UNEP and WMO. UNEP and WMO had raised the issue of global warming back in the early 1970s and had actually jointly started negotiations on an international legal instrument regarding climate change, but given the complexity and political, economic and social implications of such a convention, the General Assembly established an Intergovernmental Negotiating Committee under its own aegis. Although UNEP was no longer directly involved in the negotiations, it did participate in the four sessions the Negotiating Committee held during the year. Moreover, the Intergovernmental Panel on Climate Change (IPCC), established and supported jointly by UNEP and WMO to provide the scientific input on the issue of climate change, held two full sessions in 1991, in addition to the nine meetings of its various working groups. Thus, especially through IPCC, UNEP, jointly with WMO, made very substantial inputs into the preparations of an international convention on climate change, which was also to be ready for signature at the time of UNCED.

9. But other unplanned and unexpected events made calls on our already overstretched human and financial resources. Following the start of the armed conflict resulting from the situation between Iraq and Kuwait in mid-January, the media was filled with reports of horrendous environmental damage including massive oil spills on land and sea, firing of oil wells and the ensuing black clouds that blotted out the sunlight, dumps of ammunition and poisonous chemicals, and hectare upon hectare of unmarked mine fields. Within a few weeks (on 6 February), UNEP convened a UN inter-agency meeting in Geneva attended by some 14 agencies and international NGOs. After two weeks of intense work, the inter-agency team put together an environmental action plan and UNEP established a special trust fund that eventually yielded $2.66 million. This was in addition to a special fund established by IMO to deal specifically with oil pollution in the marine environment of the area. The first phase of the Inter-Agency Plan of Action, involving initial surveys and a preliminary assessment of the environmental damage in the region in the aftermath of the conflict, was completed on 20 July. Subsequently, UNEP, in cooperation with the Regional Organization for the Protection of the Marine Environment (ROPME), prepared a consolidated rehabilitation programme for the region. UNEP presented this programme to a funding strategy meeting organized by UNDP in mid-December.

10. During the latter half of the year, UNEP was also busy preparing another potentially very important project - a United Nations Centre for Urgent Environmental Assistance. The idea of such a centre was first mooted by the Council in 1989[4] and picked up by the General Assembly later that year,[5] but the lessons we and the rest of the UN family had learned in the need for a quick and coordinated response to the environmental impacts of the

Iraq-Kuwait conflict gave the idea added impetus. Following receipt of advice from Governments and the results of intense inter-agency consultations, the Governing Council decided in 1991[6] to establish a United Nations Centre for Urgent Environmental Assistance at the beginning of 1992 for an experimental period of 18 months. In the seven months after the Council's session in May, UNEP did the groundwork for the Centre to be established in early 1992. The activities of the Centre are to be reviewed by the Council in 1993 at which time a decision is expected on its future. Whatever the outcome, the very fact that the various UN bodies and agencies got together on a common project through which the full force of the UN's combined expertise and experience can be brought to bear on a specific and urgent environmental emergency, is certainly a good omen.

11. Another pilot operation with UNEP participation was launched in 1991, namely the Global Environment Facility (GEF). An initiative of France, supported first by Germany and then by a number of other donor countries, GEF became operational in May.[7] UNEP is one of three parties implementing GEF, the others being UNDP and the World Bank. Under this arrangement, UNEP is to provide the normative policy input, UNDP gives the technical assistance while the World Bank contributes the investment components. For the time being, GEF is being operated as a three-year pilot project. Undoubtedly, it will have to be adjusted and refined, but it has the potential to assist developing countries to deal with their environmental problems.

12. Another UNEP initiative in 1991 was, following a request by the Governing Council[8], to explore the establishment, in cooperation with the Government of Japan, of an international environmental technology centre dedicated to the transfer of environmentally sound technologies to developing countries and countries with economies in transition by provision of training and consulting services, carrying out research, and compiling and disseminating information with special focus on environmentally sustainable management of big cities and freshwater lake/reservoir basins. The centre, which is to be an integral part of UNEP, is to be fully coordinated with the activities of UNEP's Industry and Environment Programme Activity Centre and other related units. Throughout the year, UNEP continued its efforts to work out the details of the proposed centre with the Japanese Government in the hope that, once established, it would serve as a model for a whole series of such centres, in developing as well as developed countries.

13. As we take stock of 1991, we are proud of our achievements during the year and look to the coming months and years with anticipation. We have done what we could, made our preparations conscientiously and shouldered the extra workload willingly in the hope that the world community will rise to the challenge of meeting the needs of a growing population while protecting, even enhancing, the human environment. We have high hopes, hopes that we may soon have international conventions on climate change and biological diversity, hopes that the international community will reach agreement at Rio - and back that agreement with solid commitments. And yet, we know that a single conference, meeting, or international convention cannot be seen as an end in itself, but rather as a milestone on the road that stretches ahead, generation after generation. So we end 1991 with pride, hope and anticipation of promising results and new challenges.

Notes

1. In 1991, UNEP organized and convened over 110 meetings - or an average of slightly over two per week - as compared to 30 meetings in 1989 and 92 meetings in 1990.

2. Distributed under the title "Saving Our Planet - Challenges and Hopes" (UNEP/CGCS.III/2).

3. Decision 16/42, preamble.

4. Decision 15/10 of 25 May 1989.

5. Resolution 44/224 of 22 December 1989.

6. Decision 16.9 of 31 May 1991.

7. See chapter II for further details of GEF, particularly UNEP's role in it.

8. Decision 16/34.

CHAPTER II

THE COORDINATING AND CATALYTIC ROLE OF UNEP

Coordination within the United Nations System

Africa

Asia and the Pacific

Europe

Latin America and the Caribbean

North America

Western Asia

Committee of International Development Institutions on the Environment (CIDIE)

Clearing-house

Global Environment Facility (GEF)

Women

THE COORDINATING AND CATALYTIC ROLE OF UNEP

1. During 1991, UNEP continued to exercise its coordinating and catalytic role globally and regionally through a host of activities, most of which are described in more detail in the following chapter. Although the activities were very diverse, in 1991 the major part was directly or indirectly related to the preparations for UNCED. UNEP's input in this respect, as stated in Chapter I, was quite considerable. Additionally, since a considerable number of the activities under UNEP's mandate were also on the agenda for UNCED (and were therefore considered during the meeting of its Preparatory Committee), it is difficult to evaluate the exact amount of UNEP's contribution to this exercise and to pinpoint which activities carried out by UNEP have contributed to the UNCED process.

2. As a measure of UNEP's efforts to fulfill its mandated coordinating role within the UN system in the field of the environment, it should be noted that more than a quarter (i.e. 95 in number) of all the UNEP projects under implementation in 1991 were implemented in coordination with other UN agencies and bodies, including the Economic Commission for Latin America and the Caribbean (ECLAC), the Economic and Social Commission for Western Asia (ESCWA), the Economic and Social Commission for Asia and the Pacific (ESCAP), FAO, UNESCO and its Intergovernmental Oceanographic Commission (IOC), the United Nations Institute for Training and Research (UNITAR), the United Nations Sudano-Sahelian Office (UNSO), the World Health Organization (WHO) and the World Meteorological Organization (WMO).

COORDINATION WITHIN THE UNITED NATIONS SYSTEM

3. Throughout the year, the environment continued to be a central, indeed, predominant theme in the discussions, activities and programmes of the UN system. As in previous years, system-wide cooperation on environmental matters was discussed at the highest level through meetings of the Administrative Committee on Coordination (ACC), composed of all the executive heads of the specialized agencies, the World Bank and the International Monetary Fund, programmes and organizations as well as senior officials of the UN Secretariat. The ACC is chaired by the Secretary-General of the United Nations.

4. The Governing Council of UNEP in its decision 14/2 of 18 June 1987 requested ACC to report annually on the activities of the UN system in the field of the environment. The ACC is assisted in the preparation of its report by the Executive Director of UNEP who, in performing this duty, benefits from contributions by the Designated Officials for Environmental Matters (DOEM). The 1991 report of the ACC was approved at its annual

session in October 1991 and will be submitted to the Governing Council at its seventeenth regular session in 1993.

5. The System-wide Medium-term Environment Programme (SWMTEP) serves as a basis for inter-agency cooperation and is implemented through the medium-term plan and the programme budgets of UNEP and the other cooperating agencies. The ACC and the Governing Council of UNEP have both requested a review of SWMTEP II (1990-1995); by decision of the Governing Council,[1] this review is to be presented to the Council in 1993. Consequently, in 1991 DOEM discussed the nature of such a review and how it should be evaluated in light of the outcome of UNCED, especially the proposed Agenda 21.

6. Preparations for UNCED required substantial coordination efforts on the part of the UN system throughout the year under review. Most of the coordination was carried out through the UNCED Secretariat and the working parties concerned with specific topics such as oceans, fresh water, hazardous wastes, land degradation, etc. UNEP participated in most meetings of these working parties. The DOEM continued to serve as a forum for the exchange of information among agencies concerning individual and collective activities undertaken in preparation for UNCED.

7. In the field of fresh water, agencies and bodies of the UN system collaborated, within the Inter-Secretariat Group for Water Resources, in the preparations for a major International Conference on Water and the Environment to be held in Dublin in January 1992 which will also contribute to UNCED. During 1991, UNEP participated actively in the preparation of papers for that Conference.

8. In the field of environmentally sound and sustainable development, the DOEM followed up on the inter-agency project on integrating environmental considerations into development planning and programming. The project, a collaborative effort with the participation of UNDP, the World Bank, UNEP, UNIDO, FAO, WHO, the United Nations Population Fund (UNFPA), the International Fund for Agricultural Development (IFAD), the International Labour Organisation (ILO), WMO and UNESCO, has been initiated in Malaysia and efforts are being made to initiate further project activities in Costa Rica.

9. Throughout 1991 the Ecosystems Conservation Group, consisting of UNEP, FAO, UNESCO, the World Conservation Union (IUCN), and the World Wide Fund for Nature (WWF), continued to participate in and provide substantive support for the negotiating process for a convention on biological diversity. The Group also made important recommendations concerning the development of the Second World Conservation Strategy "Caring for the Earth", which was launched by IUCN, WWF and UNEP in October 1991.

10. In view of the importance the ACC attached to the full participation of all relevant parts of the UN system in the further development of the emergency response mechanism and the Earthwatch system, coordinated by UNEP, several inter-agency consultative meetings were held during 1991 to ensure that a coordinated approach was adopted.

11. In response to the environmental impacts of the conflict between Kuwait and Iraq, three UN inter-agency consultations were convened

by UNEP in Geneva, with a view to intensifying cooperation and coordination within the UN system to enable it to respond effectively to management requests from Member States. It was agreed that there was a need for a comprehensive, well coordinated and integrated approach to mitigate the potential consequences of the conflict on the terrestrial, coastal and marine environments, as well as on the atmosphere and on the health of the people. It was also agreed that support was needed for the Kuwait Action Plan of 1978. Many agencies and bodies in particular the International Maritime Organization (IMO), UNEP, WHO, WMO, the International Atomic Energy Agency (IAEA), UNDP, FAO and UNESCO/IOC, participated in the inter-agency effort, each leading activities and conducting missions within its areas of competence.

12. Inter-agency cooperation has continued in response to the consequences of the nuclear accident at Chernobyl; coordination takes place within the Inter-Agency Committee for Response to Nuclear Accidents and the Inter-Agency Task Force established by the ACC.

13. The World Climate Impact Assessment and Response Strategy Programme (WCIRP), coordinated by UNEP, is an expansion of the World Climate Impact Studies Programme. A scientific Advisory Committee was established in 1991 and the membership of WCIRP was enlarged to include UNESCO/IOC, the International Negotiating Committee for a Framework Convention on Climate Change (INC/FCCC) and IPCC. It was suggested that the membership of WCIRP be further enlarged in the future to include bodies such as the International Geosphere-Biosphere Programme (IGBP).

14. The activities undertaken within the restructured World Climate Programme (WCP) increasingly involved joint efforts between partners in the UN system. As current climate observation systems are not adequate to characterize fully the climate system or to provide the data necessary for the prediction of future climate change, cooperation in this area was expanded in 1991 within the Global Climate Observing System (GCOS) which works through both operational and research programmes and seeks to enhance existing programmes and assist in the implementation of new systems. A Scientific and Technical Committee of the GCOS was established in 1991 by the co-sponsors of GCOS, WMO, the International Council of Scientific Unions (ICSU), UNEP and IOC.

15. The heads of the agencies involved in WCP met frequently in 1991 and discussed, *inter alia*, the implementation of the UNEP Governing Council[2] and WMO Executive Committee decisions to hold an intergovernmental conference in 1992 on the coordination and financing of WCP activities.

16. Concerning desertification, coordination continues to take place within the Inter-Agency Working Group on Desertification (IAWGD). A major assessment of the world status of desertification was carried out, the results of which represent the best available estimates on the subject. The IAWGD also reviewed a study on the implementation of the UN Plan of Action to Combat Desertification (UNPACD) and a study on the financing of anti-desertification activities. The comments of the IAWGD were incorporated into the final reports which were scheduled for submission to the Governing Council at its third special session and to UNCED through

the fourth meeting of its Preparatory Committee.

17. A number of activities in which UNEP was involved were coordinated with other organizations such as the Economic Commission for Africa (ECA), ESCWA, ESCAP, UNDP/UNSO and FAO. For a full description see "Arid Lands and Desertification" in Chapter III.

18. Concerning regional cooperation, close contacts have been maintained as a follow-up to the discussions held in May 1990 between the Executive Director of UNEP and the Executive Secretaries of the regional Economic Commissions. Specific joint activities are being planned within the 1992-1993 programmes of the organizations concerned. Regional conferences were arranged by the Economic Commissions in preparation for UNCED, with support from UNEP and other agencies.

AFRICA

19. At the regional level, special attention was given to cooperation with the Organization of African Unity (OAU), culminating in the signing in New York on 10 October 1991 of a Memorandum of Cooperation Agreement by the executive heads of the two organizations. Representatives of the organizations also held frequent consultations during 1991, particularly on matters relating to the African Economic Community (notably its protocol on the environment), the Bamako and Basel Conventions on transboundary movements of hazardous wastes, the implementation of the four Regional Seas Programmes for Africa, and global negotiations for conventions on climate change and biodiversity. UNEP and OAU also cooperated in arrangements for the observance of 1991-1992 as an African year for the environment; a number of activities were launched, including public awareness programmes and the preparation and distribution of special media kits, posters and other information materials. Furthermore, specific regional consultations were carried out within the framework of major African programmes and initiatives relating to environment and development, including the OAU Pan-African Conference on Environment and Sustainable Development (Bamako, 28-30 June 1991), the First African Regional Preparatory Conference on UNCED (Cairo, 16-18 July 1991), and the African Regional Programme of Action on the Environment of the African Ministerial Conference on the Environment (AMCEN) (fourth session - Nairobi 22-24 May 1991).

20. OAU sent a delegation to the sixteenth session of the UNEP Governing Council in May 1991 and senior representatives of UNEP participated in the Council of Ministers and the Summit of Heads of State/Government of the OAU in June 1991. In addition, OAU adopted a number of resolutions supporting the strengthening of the work of UNEP globally and, in particular, in the Africa region. As a result of these consultations and cooperative activities, there has been, among the political leadership of Africa, a significant increase in the awareness of the possible negative impact that poorly conceived development activities can have on the natural resource base.

21. Cooperation with African NGOs during the year under review was carried out largely within the framework of the preparations for UNCED. In this connection, UNEP's Regional Office for Africa (ROA) closely

cooperated with the Centre of Our Common Future in organizing the Public Eco-Forums in Nairobi in May 1991 and in Cairo in July 1991.

22. Cooperation with ECA was substantially stepped up. UNEP and ECA cooperated closely in the convening of the Regional Preparatory Conferences on UNCED (Cairo, July 1991 and Abidjan, November 1991) aimed at consolidating a common African position on environment and development. Follow-up actions were undertaken within the context of the Agenda for Action for Achieving Sustainable Development in Africa, which was adopted in November 1991 in Abidjan by African countries in response to the report of the World Commission on the Environment and Development as well as the UNEP *Environmental Perspective to the Year 2000 and Beyond*. UNEP and ECA continued regular consultations throughout the year, aimed at enhancing the integration of environmental considerations into development programmes.

23. Special measures were undertaken in 1991 to reinforce existing cooperation between UNEP and the African Development Bank, notably with regard to the implementation of a Cooperation Agreement, signed in 1990 by the executive heads of the two organizations. Implementation of the Agreement entails the provision of assistance to African countries in the area of environmental management and the integration of environmental factors into development planning.

24. In 1991, UNEP increased its support for AMCEN's African Regional Programme of Action on the Environment, which was established to address the African crisis. During the reporting period, UNEP, through the AMCEN Secretariat, facilitated the implementation of community-based pilot projects. Subregional cooperation on transboundary resources and ecosystems common to several countries, such as seas, river and lake basins, forests and woodlands, desert and arid lands, was enhanced through the support provided by UNEP to five continent-wide committees. At the regional level, UNEP promoted cooperation between African institutions through the activities of regional cooperation networks in the fields of environmental monitoring, climatology, soils and fertilizers, energy, water resources, education and training, genetic resources, and science and technology.

25. At the subregional level, throughout 1991 ROA continued to support the work of the five African Subregional Environment Groups (SREGs) for Western, Northern, Eastern, Southern and Central Africa respectively. The purpose of the SREGs, which were established by UNEP, is to promote subregional cooperation concerning the environment, in particular with regard to shared natural resources such as river and lake basins, seas, etc. Cooperation with African intergovernmental bodies, such as the Southern African Development Coordination Conference (SADCC), the Intergovernmental Authority on Drought and Development (IGADD), the Permanent Interstate Committee for Drought Control in the Sahelian Zone (CILSS), the Preferential Trade Area (PTA), the Economic Community of Western African States (ECOWAS) etc. was strengthened and consolidated. The preparations for UNCED led to increased UNEP assistance to these subregional bodies. UNEP cooperated with other UN agencies such as the ECA, UNDP-UNSO, FAO and

UNESCO, in promoting the work of these organizations and took part in the consultations between the UN system and African intergovernmental organizations in May 1991 on the subject of preparations for UNCED.

26. In 1991, the main thrust of ROA's activities was directed, at the national level, on the following areas: strengthening of environmental management machineries and legislation; integration of environmental considerations into development planning processes; strengthening of national capabilities for environmental monitoring and assessment; reinforcement of programmes for environmental education, training and public awareness; formulation of National Environmental Action Plans, programmes and strategies; and mobilization of resources for the implementation of such plans and programmes.

27. Furthermore, UNEP undertook special measures to enhance cooperation between and among key sectoral ministries and departments. This was done, *inter alia*, through various training activities which acquainted participants with key aspects of environment and economics. Several African countries benefited from the various fellowship schemes operated by UNEP, which enabled over 200 government and NGO personnel to attend workshops, seminars, conferences, etc. all of which contributed to a substantially increased awareness of issues relating to the environment.

28. In response to the significant increase in requests from African countries for UNEP's assistance, UNEP provided advisory and technical services to address specific environmental concerns, e.g. environmental accounting and environmental impact assessment. This assistance to the African countries by ROA enhanced and facilitated the linking of environmental management goals, policies and strategies to the overall objectives of national development plans and expanded the impact of environmental management policies on key areas such as food security, demographic changes and pressures, energy, investments, economic policies and budgets. Furthermore, UNEP's cooperation with African countries has reinforced their sectoral ministries' capabilities to play a key role in the management and protection of the natural resource base.

ASIA AND THE PACIFIC

29. In 1991, the main thrust of UNEP's activities, carried out by its Regional Office for Asia and the Pacific (ROAP), continued to be directed towards six areas: provision of technical advice and assistance; awarding of fellowships; promotion of environmental awareness; implementation of technical cooperation projects under trust funds; backstopping of UNEP-implemented or UNEP-coordinated projects; and provision of inputs and support for activities of other UN agencies, international organizations and regional and national bodies.

30. In 1991, a total of 45 fellowships were provided to enable nationals in 15 developing countries in the region to participate in environmental workshops, seminars and conferences. Technical collaboration between ROAP and certain national, regional and international organizations was implemented through the provision of expert personnel for environmental activities such as conferences and workshops, including two training

seminars on hazardous waste management in Malaysia and the Phillippines, in collaboration with the Carl Duisberg Gesellschaft. ROAP provided consultancy services for upgrading the feasibility study of the environmental improvement of the Grand Canal (Hangzhou stretch) in China. A memorandum of understanding was initiated between UNEP and the South Asia Cooperative Environment Programme (SACEP) to support the latter in the preparation of an environmental programme.

31. To promote environmental awareness, ROAP's activities in the region in 1991 focused on the eight areas of concentration as outlined in Governing Council decision 15/1, IV. UNEP posters, publications, films and audio-visual materials were disseminated. Four issues of the quarterly *ROAP Newsletter* were published, with a circulation of around 3,000. Three issues of *Environmental News* (clippings from the newspapers in the region) were also sent to participating individuals and institutions. In addition, displays and exhibitions of UNEP publications and posters and video shows were organized in conjunction with a number of meetings and conferences e.g. Enviroworld 91 Conference and Exhibition and the ENVIRO ASIA '91 International Conference and Exhibition on the Environment, both held in Singapore.

32. The Clearing-house - funded and ROAP-coordinated project "River rehabilitation programme for Manila Bay" was successfully concluded with the cooperation of the Philippines Environmental Management Bureau. ROAP initiated the implementation of a UNEP project comprising a training workshop on safe handling and use of pesticides and household chemicals for leaders of womens' groups in selected countries of the Asia/Pacific region, and completed the first phase of activities under this project.

33. ROAP made further progress in the implementation of the trust fund project (funded by Sweden) on assistance in chlorofluorocarbon (CFC) use and control in developing countries initially in the South-east Asia region. A report was prepared on consumption and use patterns for CFCs and Halons in the four participating countries (Laos, Malaysia, Singapore and Thailand). In late November 1991, ROAP supported the holding of a UNEP workshop on the implementation of the Montreal Protocol on Substances that Deplete the Ozone Layer for about 100 participants from countries of Asia and the Pacific.

34. Under another ROAP - coordinated trust fund project (also funded by Sweden) to develop a Network of Industrial Environmental Management (NIEM), Phase II activities were continued throughout 1991 with 31 national institutions from 8 countries carrying out field studies, mainly in small-scale non-wood pulp and paper mills. With the guidance of consultants, information was exchanged and training manuals were prepared on the environmental management of the mills. Two national NIEM training workshops were held in India, using training manuals prepared under the project.

35. In addition to backstopping projects and activities in the region, in 1991, ROAP continued to provide support to subregional intergovernmental environmental organizations, such as the South Asia Cooperative Environment Programme (SACEP) and the Association of South-East Asian Nations (ASEAN), and for the activities of other UN bodies and agencies, including UNDP,

ESCAP, FAO, UNESCO, WHO, the Asian Development Bank (AsDB) and the World Bank. ROAP was appointed by UNDP to be a convener for an inter-agency advisory group on environment meetings to prepare a UN strategy framework to support Thailand's Seventh National Economic and Social Development Plan.

36. In cooperation with UNEP's Information and Public Affairs (IPA) Unit, ROAP organized a team of resource persons to participate in the seventeenth World Jamboree of the World Organization of the Scout Movement, held in the Republic of Korea in August 1991. The first meeting of the ROAP - coordinated Regional Environmental NGO Network-Asia/Pacific was held on 2 and 3 October 1991 and was attended by regional network representatives from nine countries in the region.

EUROPE

37. During 1991 UNEP, through its Regional Office for Europe (ROE), continued its efforts to raise extra-budgetary funds and continued its consultations with several Governments on the launching of the UNEP coin programme to commemorate the 20th anniversary of the Stockholm Conference. The aim of the programme, apart from raising additional funds for UNEP, is to increase public awareness of global environmental issues. ROE prepared and circulated to Governments of the region a UNEP proposal to create a special official stamp for use in various countries to help increase awareness of and raise funds for the environment.

38. ROE continued its efforts to disseminate information to a large constituency of media, NGOs, IGOs, Governments and other contacts through the UNEP *Regional Office for Europe Bulletin*, which was published in English and French and distributed to over 2,000 addresses.

39. Following the informal meeting organized by UNEP and the National Environment Committees in October 1990, negotiations took place in 1991 regarding the establishment of UNEP National Committees in Bulgaria, Hungary, Turkey and the Ukraine.

40. ROE carried out work on a special project "Banks and the Environment", aimed at examining ways of assisting banks in responding to the increasing importance and complexity of environmental issues. Discussions were held with selected commercial banks, based on a document entitled "Message on Banking and Environmentally Sound and Sustainable Development". The ultimate goal of the project is to have a group of approximately 25 commercial banks sign a charter before the UNCED meeting takes place in June 1992.

41. Through ROE, UNEP continued to maintain regular and close working relationships with various intergovernmental bodies, such as the Economic Commission for Europe (ECE), the Organisation for Economic Cooperation and Development (OECD), the Council of Europe and the European Economic Community (EEC), and continued to follow developments on environmental matters within the Nordic Council and the European Free Trade Association (EFTA).

42. Among the important meetings in the region in which UNEP participated were: the

53rd and 54th sessions of the OECD environmental committee; the 46th session of ECE; the fourth session of the Senior Advisors to ECE Governments on Environment and Water Problems; a Third World Conference on Action for Public Health (called the Sundsvall Conference on Supportive Environments for Health), organized by the Nordic Council and the Scandinavian Governments, together with WHO, and co-sponsored by UNEP; the eighth ECO '92 Public Forum on Environment and Sustainable Development in Prague; a UN inter-agency consultation on the Programme of Action for the Least-Developed Countries for the 1990s; the UN inter-agency working group and steering committee for the International Decade for Natural Disaster Reduction (IDNDR); the International Environment Fair and Conference, held in Istanbul (Turkey); and the official launching of the "Caring for the Earth" strategy in Bern.

43. An important event in the region was the "Environment for Europe" Conference of European Ministers of the Environment, held in Prague in June, to discuss the future of Europe-wide cooperation on the environment. UNEP participated in the Conference, which called for the preparation of a report describing the state of the environment in Europe, to be published before the end of 1993. The Conference also stressed the need to develop an environmental programme for Europe to serve as a framework for better coordination of national and international efforts in the region, with particular focus on Central and Eastern Europe. UNEP took part in a follow-up meeting convened in Switzerland to elaborate concrete proposals for future action based on the conclusions of the Conference.

LATIN AMERICA AND THE CARIBBEAN

44. In October 1990, the Governments of Latin America and the Caribbean adopted an Action Plan as a framework to strengthen regional cooperation on environmental matters. UNEP was requested to act as secretariat for this Plan. One of the principal elements of implementing the Plan was to be the promotion of information exchange among Governments and international agencies and the development of coordination mechanisms for the internationally sponsored environmental management activities taking place in the region.

45. During 1991, UNEP's Regional Office for Latin America and the Caribbean (ROLAC) initiated the establishment of an electronic information-exchange service to provide the region's Governments with access to international databases and to forums for information exchange and tele-conferencing.

46. As the secretariat of the Plan, in July 1991 UNEP, in collaboration with the Pan-American Health Organization (WHO), convened a meeting to constitute the Inter-agency Consultative Support Group (ISCG) called for by the Action Plan. At this meeting, 20 United Nations agencies and bodies and regional and subregional organizations sponsoring or undertaking environmental management actions in the region committed themselves to concerted action in support of the Plan.

47. The inter-agency working groups established at the meeting have collaborated in developing specific project proposals within the programme areas of the Plan. UNEP's coordinating and catalytic role in the Latin

American and Caribbean region has furthered concerted efforts by Governments and international organizations to implement the Action Plan.

NORTH AMERICA

48. In early 1991, the conflict in the Gulf dominated the United Nations' attention as well as that of the media. It was compounded by the largest ever oil spill in the Persian Gulf, with its long-term environmental implications. This generated considerable pressure on UNEP's Regional Office for North America (RONA) for a quick response and assessment of the situation. Following a meeting with the Secretary-General, the Executive Director at a press briefing at UN Headquarters outlined the measures he had taken in response to the oil spill in the Persian Gulf.

49. During 1991 the Headquarters Agreement between the Government of Canada and UNEP establishing the Secretariat for the Interim Multilateral Fund for Implementation of the Montreal Protocol in Montreal was finalized and the staff of the Secretariat were installed.

50. UNEP, through RONA, participated in the Third Summit of Major Cities of the World, held in Montreal. One of the results of the Summit was a Declaration on sustainable urban development entitled the "Toronto Declaration".

51. On another front, the first session of the Intergovernmental Negotiating Committee for a Framework Convention on Climate Change met in Washington from 4 to 14 February 1991, with active and substantive participation by UNEP. The Committee formally adopted guidelines setting a framework to curb the threat of global warming and considered financial and technical assistance to less-developed countries.

52. A two-day World Environmental Financing Conference, organized by the Investment Management Institute, with the support of UNEP, was held at UN Headquarters on 5 and 6 September 1991. This innovative Conference explored how the international financial community could achieve substantial returns by investing in environmentally beneficial technologies and projects.

53. Under its Outreach Programme, UNEP organized a number of events in the North American region, including the premiere of a film entitled "Voices of the Rainforest" within the framework of the Amazon Week II. UNEP also sponsored a meeting in cooperation with the Institute for Resource Management, to discuss "International cooperation and northern forests". The meeting addressed current efforts to deal with various threats facing northern forests as well as the proposed creation of an international institute for such forests. Other salient events in Outreach activities included World Environment Day 1991; a 90-minute special premiere of the film Moyers-Spirit and Nature was presented by Bill Moyers to an audience of 200 religious leaders; the United Earth Inauguration Ceremony was held; the Earth prizes (also called "Green Nobel" Prizes) for environmental leadership and humanitarian excellence were presented at the UN World Environment Day ceremony; the UNEP photo contest was officially launched in New York, within the framework of the UNEP/Canon International Photo Competition; "Caring for the Earth" was launched; and, in Jamaica a

National Environment Committee was formally established.

54. Continued Outreach efforts directed towards the United States Government resulted in the secondment of United States personnel to UNEP; the provision of UNEP internships for United States students; the ratification of some conventions initiated by UNEP by the United States; and the provision of funds from the United States for, *inter alia*, the Global Assembly of Women and the Environment, the Montreal Protocol initiatives, the hosting of Climate Change meetings, and for general cooperation between UNEP and NGOs, United States business and industry, and religious communities.

55. Continued interaction with the National Committee for UNEP resulted in cooperation in organizing the events of World Environment Day, in Congressional initiatives, and in editorial input into the newsletter issued by the National Committee.

WESTERN ASIA

56. The most important environmental event in the region in 1991 was the severe damage to an ecologically fragile region caused by the conflict between Iraq and Kuwait. In January 1991, as soon as the massive release of oil into the marine environment was reported, UNEP's Regional Office for Western Asia (ROWA) began to monitor all information and data related to the oil slick. The Regional Organization for the Protection of the Marine Environment (ROPME) was reactivated with the support of UNEP/ROWA and a temporary office was opened in Bahrain, with the support and encouragement of ROWA. ROPME called for a meeting of technical experts which was held in Bahrain on 26 and 27 February 1991. At that meeting UNEP presented a framework of action to mitigate adverse effects and rehabilitate the environment in the ROPME region. The action plan was adopted unanimously. In March 1991, the second UN inter-agency consultation was held in Geneva. At that meeting the Action Plan was further developed and adopted. During the implementation of Phase I of the Action Plan, ROWA organized visits by various experts to the countries in the region in order to assess the environmental damage. In addition ROWA, in concert with UNEP Headquarters, helped to implement the terrestrial ecosystems component of the Action Plan. Thus, a multidisciplinary team was selected to undertake the rapid assessment of the impacts of the conflict on terrestrial ecosystems. The team visited Iraq, Kuwait and Saudi Arabia for one week each during August 1991 and prepared a study which was approved by ROPME at a meeting held in Kuwait on 28 September 1991. The study was further ratified at ROPME's Ministerial Meeting in October 1991.

57. The problem of air pollution caused by the oil fires in Kuwait raised deep concern throughout the region. In December 1991 ROWA initiated a study to assess the capabilities of air pollution laboratories and air pollution monitoring networks in some ROWA countries. The results are expected to describe the ways to strengthen the capabilities of the countries in the region through training and the provision of equipment.

58. In keeping with its catalytic role in the region, ROWA arranged for a consultant to undertake a mission to Yemen to assist the newly established National Council for Environment in preparing a basic law on the environment. A draft of the basic law was

reviewed by ROWA and UNEP's Environmental Law and Institutions Unit. In June 1991 the revised draft was presented to the Environment Protection Council in Yemen.

59. During 1991, ROWA assisted in the preparations for the Ministerial Regional Conference on Environment in preparation for UNCED, held in Cairo, from 10-12 September 1991. Under the auspices of ROWA, a consultant assisted Yemen in preparing its national report to this meeting and another consultant prepared a background paper entitled "Regional strategy on environmentally sound and sustainable development".

60. ROWA hosted the second meeting of the Task Team on the Implication of Climate Change for the ROPME Sea Area, organized by UNEP's Oceans and Coastal Areas Programme Activity Centre in Bahrain from 1 to 4 September 1991. The Task Team discussed guidelines and criteria for assessing vulnerable areas and applied them to selected vulnerable areas in the region.

61. The first edition of the "Directory for Tertiary Level Institutes and Personnel Active in Environment" was distributed, and new questionnaires for updating were sent to all tertiary level institutions in the region. The first meeting of focal points for the network of tertiary level institutions was held in Bahrain on 17 and 18 December 1991, at which reports on the state of environmental education at the tertiary level in the region were presented. These reports formed the basis for the adoption of several recommendations.

62. UNEP organized a workshop on the Implementation of the Montreal Protocol on Substances that Deplete the Ozone Layer in Cairo from 9 to 12 December 1991. The objectives were to review the effect of CFCs on the atmosphere; discuss policies, strategies and other activities being implemented by various countries to phase out CFCs; and to examine the possibility of international funding.

63. In 1991 ROWA published three issues of the *Environmental Forum* in Arabic, and the Eighth Annual Arab Regional Painting and Essay Competition was again held at ROWA in Bahrain. This competition is held every year, in cooperation with the Arab Regional Office of the United Schools International, to promote environmental awareness among youngsters. The themes of this year's competitions were War Destroys the Environment; Oil Spills; and Clean Cities.

64. During 1991, UNEP completed the National Plan of Action to Combat Desertification (NPACD) for Yemen, and in November 1991 a one-day workshop was convened to discuss the implementation of the Plan. The NPACD for Bahrain was also completed and submitted to the Bahrain Government.

65. The implementation of the Memorandum of Understanding between the Organization of the Islamic Conference (OIC) and UNEP, signed in Jeddah in May 1990, marked another cooperative activity. A first joint programming session between UNEP and OIC was held in Jeddah in September 1991. Several cooperative activities were agreed upon, including:

(a) Preparation of a State-of-the-Environment (SOE) Report for OIC member countries, following UNEP guidelines;

(b) Assistance to OIC in preparing a report on the environmental situation in the occupied Arab territories, which has been requested by the Foreign Ministers of the Islamic countries;

(c) Development of an integrated pilot project on natural resources management in three selected OIC member countries;

(i) For Djibouti - on the introduction and diffusion of environmentally sound technology for energy production in rural areas;

(ii) For Pakistan - on strengthening environmental management and planning capabilities for fresh water resources;

(iii) For Niger - on sand dune stabilization and afforestation demonstration.

COMMITTEE OF INTERNATIONAL DEVELOPMENT INSTITUTIONS ON THE ENVIRONMENT (CIDIE)

66. The twelfth meeting of CIDIE was held at the Inter-American Development Bank (IDB) in Washington from 29 April to 1 May 1991. Seven heads of institutions participated: the President of the IDB; the Executive Director of UNEP; the President of the World Bank; the Administrator of UNDP; the President of AsDB; the President of the European Investment Bank (EIB); and the President of the Nordic Investment Bank (NIB). Also taking part were representatives of the African Development Bank (AfDB), the Caribbean Development Bank (CDB), the Central American Bank (CAB), the Commission of the European Communities (CEC), FAO, the International Fund for Agricultural Development (IFAD), the Organization of American States (OAS) and the World Food Programme (WFP). Representatives of 20 observers (bilateral, non-governmental and international organizations) also attended.

67. One of the main features of the meeting was the issuance of a CIDIE communique in which members acknowledged the importance of UNCED as the single best opportunity left this century to promote the interplay of environment and development goals and pledged their strong support for it. The members indicated that in their development activities they would address the new global environmental threats, including stratospheric ozone depletion, climate change and biological diversity, as well as deforestation, fresh water and ocean pollution and land degradation. Members also pledged to take more assertive steps to help develop governmental capabilities to address sustainable development and emphasized the need for additional external concessionary financial resources for developing countries and access to technologies and training for sustainable development. Further, the members acknowledged the importance of addressing issues such as population growth, debt burdens, commodity prices, subsidies, trade, renewable energy sources, sustainable agriculture and forestry and energy-efficient transportation. The communique called for a global partnership involving collaboration among CIDIE members, governmental development institutions and international organizations, UN organizations, bilateral organizations, NGOs, the private sector, the scientific community and private banks in the field of sustainable development. The communique also acknowledged the vital

role CIDIE members have to play to address the needs of environmentally sound and sustainable development, and it was agreed that an active collaborative policy and cooperative programmes would be promoted.

68. At the meeting, the representative of UNCED expressed his appreciation for CIDIE's support to UNCED, as evidenced by the communique and the role CIDIE member institutions were playing in the preparations for the Conference. Related issues discussed during the meeting included institutional arrangements required for environmental management, the financing of sustainable development programmes and the coordination of programmes and activities undertaken by CIDIE members. Based on the communique and discussions during the meeting, an Action Programme was adopted by CIDIE.

CLEARING-HOUSE

69. UNEP's Clearing-house continued to devote its efforts to address requests for collaboration and assistance from developing countries. In many cases, the requests arose from a growing interest in and concern with the character and scope of natural resources degradation, as well as adherence to international conventions and the application of environmental guidelines or principles adopted in international and regional forums.

70. In order to respond to some of the requests, in 1991 the Clearing-house expanded the umbrella project for "Building the institutional and regulatory capacity for sound natural resource management in developing countries". The project aims at assisting individual countries to apply a comprehensive and participatory process for policy and strategy formulation, and at strengthening the institutional capacities to undertake policy interventions in key areas identified.

71. Specific activities under the umbrella project are designed in response to requests from Governments. In 1991, activities were under way in Burundi, Gambia, Guinea, Guyana, Kenya, Mozambique, the Philippines, Rwanda and Viet Nam and experts in different technical fields were sent to a number of these countries. Other UNEP project activities that received support through the Clearing-house in 1991 included promotion of water control in Africa; provision of advisory services on the formulation of national soils policies; training course on soil and water conservation and management in West Africa; promotion of cleaner production; a workshop on the environment and sustainable development for Portuguese-speaking African countries and Equatorial Guinea; and training workshops on hazardous waste management.

72. The Clearing-house, in its regular contacts with the donor community, provides information about and promotes its activities as appropriate. With regard to financial support to the Clearing-house, the Government of Finland in 1991 substantially expanded the activities initiated through the Technical Cooperation Trust Fund to Assist Developing Countries to Meet Serious Environmental Problems. A contribution of some US$330,000 was approved for various essential programmes ranging from institutional strengthening to an assessment of soil degradation and the digitizing of a soil and terrain database in a pilot area in East Africa. In addition, the Government of Norway approved a contribution of US$15,152 for the

project "Institutional Strengthening" as well as for the secondment of a number of Norwegian consultants to support the UNEP Global Environment Facility (GEF). During 1991, many of the activities were carried out with funds earlier contributed by Germany and Sweden.

73. In the environmental field, an important source of assistance to developing countries with which UNEP is cooperating through the Clearing-house is the Arab Gulf Programme for United Nations Development Organizations (AGFUND). So far, activities with AGFUND support have been or are being undertaken in Bahrain, Djibouti, Egypt, Peru, Sudan, Uganda and Yemen.

GLOBAL ENVIRONMENT FACILITY (GEF)

74. The GEF became operational following a meeting of the participating countries on 1 and 2 May 1991 in Washington DC, when the countries also confirmed that the implementing agencies of the GEF were UNDP, UNEP and the World Bank. The GEF is a new financing operation, established for a three-year pilot period to assist developing countries to meet four specific challenges to the environment: - reduction of global warming gas emissions; protection of biodiversity; protection of international waters; and protection of the ozone layer.

75. The decision by Governments had been preceded by earlier consultations, held under the auspicies of the World Bank, at the initiative of the Government of France, supported by the Government of Germany, to mobilize additional funding for basic issues of environmental concern. In that spirit, on 17 September 1990 the Executive Director of UNEP, the Administrator of UNDP and the President of the World Bank had called upon Governments to establish the Facility and had expressed the willingness of their organizations to cooperate in its implementation.

76. In keeping with the role that UNEP had been designated, in April 1991 the Executive Director established a Scientific and Technical Advisory Panel (STAP), comprising 12 members and later expanded to 14 members. Before appointing the STAP, the Executive Director solicited nominations from Governments and consulted the Administrator of UNDP and the President of the World Bank. The members of STAP come from the following countries: the United States (Chairman), Ghana (Vice-Chairman), Brazil, China, France, Germany, India, Japan, Mexico, Norway, the Philippines, Sudan, Sweden and the United Kingdom.

77. During 1991, the STAP held sessions from 22-24 April (Geneva), 15-17 July (Washington, DC) and 23-25 September (New York). The STAP convened other meetings in 1991 to deal with specific topics: 26-27 March, Nairobi (preparatory); 10-12 June, Washington DC (biodiversity); 14-15 June, Princeton, USA (global warming); 24-26 June, Geneva (international waters); and 22-23 August, Amsterdam (working modalities and consultations with International Geosphere Biosphere Programme). UNEP assigned several staff members to assist the STAP and prepared documents to facilitate its work. The STAP produced the "Criteria for Eligibility and Priorities for Project Selection for GEF Funding". The STAP also worked on a detailed roster of scientific and technical personnel who are experts in the

central GEF issues, to be used by the implementing agencies for technical review and appraisal purposes. The STAP made a cursory review of the GEF first tranche projects and, under severe time pressure, reviewed the second tranche projects.

78. The Executive Director of UNEP met with the other two Heads of Agencies on 29 April and 28 October 1991 to review the development of the GEF. UNEP attended all the Inter-agency Implementation Committee meetings, which were held regularly throughout the year to address GEF policy issues and process projects for the consideration of participants.

79. UNEP staff and consultants reviewed several of the projects included in the first and second tranches, although UNEP's reviewing capacity was limited by the fact that no funding was available before the inter-agency agreement was signed on 28 October 1991. Soon after that, a trust fund agreement was signed between UNEP and the World Bank, which administers the GEF. The Executive Director had advanced US$700,000 from UNEP reserves to facilitate the establishment of the STAP. These funds also made it possible for UNEP to attend the relevant GEF meetings, but no additional staff had been contracted before the trust fund agreement was signed.

80. UNEP proposed to execute two projects within the GEF work programme. Both were country case studies which would serve the purposes of global environmental conventions currently under preparation. One project concerned the costs, benefits and unmet needs of biodiversity conservation and the other the sources and sinks of greenhouse gases and the costing of emissions reduction.

81. The GEF introduced a window for small grants for NGOs of US$5 million and invited NGOs to a number of consultations. UNEP distributed information about the GEF through its own publications and at the meetings it sponsored.

WOMEN

82. Two regional Assemblies of Women and the Environment were instigated by UNEP through its Washington office, one in Bangkok (11-15 March 1991) for Asia and the Pacific and one in Quito, Ecuador (19-22 March 1991) for Latin America and the Caribbean. Subsequently, UNEP organized the publication and dissemination of over 4 000 copies of the reports emanating from these regional assemblies to Governments, NGOs, the UN system as well as to the Organization of American States and the Latin American Regional Commission on Women.

83. As part of follow-up activities to the African Women's Assembly on Sustainable Development held in Harare, Zimbabwe (6-9 February 1989), UNEP assisted the organizers of the Global Assembly on Women and Environment (United States, November 1991) in ensuring the full participation of African women's organizations in the Assembly. Special studies were commissioned to prepare a report on the role of African women in sustainable development.

84. In conjunction with WorldWIDE (World Women in Environment), UNEP organized and implemented the Global Assembly of Women and the Environment, "Partners in Life", in Miami, Florida from 4-8 November 1991. UNEP contributed

approximately US$160,000, which in turn helped to catalyse the US$1,250 million for the total budget of the Assembly. Approximately 590 participants representing all regions, 84 nations, and 10 UN agencies, including UNCED, attended. Catalytic efforts resulted in the identification of 218 success stories initiated by women in the areas of waste, water, energy, and environmentally friendly systems, products and technologies which were repeatable, visible, sustainable and affordable. The efforts also involved the formation of an ad hoc UN Global Assembly Working Group, co-chaired by UNEP and the United Nations Development Fund for Women (UNIFEM), with the following members: UNDP, UNICEF, UNCHS (Habitat), the UN Center for the Advancement of Women, the International Research and Training Institute for the Advancement of Women (INSTRAW), IFAD, the World Bank, and OECD Development Activities Committee.

85. The compendium containing the write up of the 218 success stories as well as the findings, recommendations and catalytic strategies produced at the Assembly was sent to heads of all UN agencies to encourage follow up actions within each agency. The compendium was also sent to all the DOEM, members of CIDIE, additional relevant Government agencies that individually address women and/or environment issues, relevant NGOs, religious organizations with development assistance programmes, and all participants in the Global Assembly.

86. These catalytic efforts have resulted in a new mandate in UNIDO concerning women and the environment; a 50-member task force in the World Bank to follow up on the Assembly's recommendations and findings; an IFAD meeting of women spouses of Heads of State on the subject of rural women's with emphasis on environment; a new focus for community development in UNDP; the commitment of an initial US$50,000 by UNDP to 10 nations to bring together those who presented success stories at the Global Assembly to enable them to address their respective government and donor agencies operating within each nation; and the establishment of a UNDP/UNIFEM joint task force to assist in further replicating those success stories. INSTRAW established a new research project on women and the environment. The ad-hoc UN Global Assembly Working Group unanimously decided to continue serving as a coordinating mechanism following the Assembly to advance inter- and intra-agency cooperation and coordination between women's programmes and environmental programmes within and among UN agencies.

Notes

1. Decision 15/21 of 25 May 1989.
2. Decision 16/41, IV of 31 May 1991.

CHAPTER III

THE ENVIRONMENT PROGRAMME

Atmosphere

Water

Terrestrial ecosystems

Oceans and coastal areas

Lithosphere

Human settlements and the environment

Human health and welfare

Energy, industry and transportation

Peace, security and the environment

Environmental assessment

Monitoring and assessment

Environmental management measures

Environmental awareness

THE ENVIRONMENT PROGRAMME

1. The *Annual Report* for 1991 marks the end of the biennium 1990-1991. The present chapter outlines the extent of the activities carried out by the Office of the Environment Programme, in which a limited number of staff were stretched to the maximum in the effort to carry out the approved programme, implement - or launch action to implement - the many decisions adopted by the Governing Council at its fifteenth and sixteenth sessions, and comply with the numerous requests for assistance in the preparations for the United Nations Conference on Environment and Development (UNCED). The scope of the tasks undertaken is attested to by the list of projects annexed to the present *Report* (see Annex V) and by the descriptions of activities under the various subprogrammes outlined in the Chapter.

2. In 1991, the Programme had to cope with enormous demands in preparing inputs and attending and servicing a number of intergovernmental, scientific and non-governmental meetings of a global or regional character, or on selected national issues. Predominant among the meetings were those relating to the preparatory process for UNCED, including the UNCED Preparatory Committee and working groups; IPCC; the Intergovernmental Negotiating Committee for a Convention on Climate Change; the Intergovernmental Negotiating Committee for a Convention on Biological Diversity, which is under the auspices of UNEP; and a number of others where it was deemed that the presence and contribution of UNEP were of importance.

3. Other pressing demands on the staff of UNEP concerned the preparation of draft reports or comments on such reports, in compliance with requests by the General Assembly, the Secretary-General of the United Nations or ECOSOC, and also in accordance with additional requests by UNEP's own Governing Council. Among such reports were: the Secretary-General's response to General Assembly resolution 44/227 of 22 December 1989, on the implementation of resolutions 42/186 and 42/187 on the Environmental Perspective to the year 2000 and Beyond and on the Report of the World Commission on Environment and Development, respectively; resolution 44/224 of 22 December 1989 on international cooperation in the monitoring, assessment and anticipation of environmental threats and in assistance in cases of environmental emergency; and resolution 44/172 of 19 December 1989 on the Plan of Action to Combat Desertification.

4. Considering the wide range of activities undertaken, the description that follows should not be considered as a comprehensive summary of the work carried out by each of the Programme elements to respond to the incessant demands, which in some instances, for example, the environmental impacts of

the conflict over Kuwait, called for urgent attention. More than ever before, interdisciplinary approaches were increasingly brought into play in addressing environmental challenges and the agenda before the international community.

5. The Environment Programme is multidisciplinary and cross-sectoral. Every effort is made to ensure that a holistic approach is applied to environmental problems and issues. Coordination between the different programmes and activities within the Office of the Environment Programme is essential. As indicated in previous *Annual Reports*, presentation by budget lines should not lead to a compartmentalized view of the Programme since, to a varying extent, numerous interlinkages exist between programmes. Assessment and support measures cut across activities undertaken under most budget lines. In addition, many such activities are related to one another in practice through the development of projects covering more than one budget line.

6. While 1991 did not witness the public successes that characterized 1989 and 1990, the year was marked by sustained efforts towards achieving meaningful conventions on biological diversity and on climate change. The year 1991 should be remembered not only as one of preparation but for sustaining the momentum generated in the previous years. The eight areas of concentration set out by the Governing Council in its decision 15/1 (IV) were constantly kept in focus. The Programme Review Seminar, held in November 1991 under the chairmanship of the Executive Director, took a reflective look at the performance of the biennium 1990-1991 and established concrete targets for 1992, targets which will be pursued with vigour.

7. Owing to the need for brevity, within the space of the present Chapter it is not possible to describe all programme activities carried out in the year under consideration. The following paragraphs highlight the main activities carried out, many of which build on activities already noted in previous *Annual Reports*. To complete the picture, the present chapter should be read in conjunction with the programme budget for 1990-1991, contained in document UNEP/GC.15/9/Add.1, with the 1991 Report on New Projects and with Annex III to the present document.

ATMOSPHERE
(Budget line 4102)

8. The 1990-1991 work programme of GEMS/Atmosphere was recommended by the Scientific Advisory Committee of the World Climate Impacts Studies Programme at its seventh session, held in Mauritius in January 1990 to include: (a) greenhouse gases/climate change; (b) coordination of climate impact activities; (c) methods of climate impact assessment; and (d) monitoring.

9. The Second World Climate Conference held in October/November 1990, had recommended that "greater emphasis in the strengthened World Climate Programme should be given to adaptation, mitigation and education, with adaptation and mitigation activities closely linked to the Impacts Studies Programme". Subsequently the XI World Meteorological Congress, in May 1991, and UNEP's Governing Council at its sixteenth session during the same month (in its decision 16/41), endorsed these recommendations and the programme was subsequently renamed "The World Climate Impact Assessment and Response Strategies Programme".

Climate-related monitoring

WMO/UNEP Background Air Pollution Monitoring Network - (BAPMoN)

10. Support for BAPMoN's operations as part of the United Nations system-wide Global Environment Monitoring System continued throughout the year and data continue to be published on an annual basis. An analysis of BAPMoN data was carried out by a UNEP consultant and, following extensive peer review in 1991, is scheduled to be published in 1992 as a volume in the GEMS library series. A consultative meeting of experts was held in Greece in April 1991, to consider the nature of the operations to be carried out at Global Atmosphere Watch regional stations (including those of BAPMoN), and their desired distribution. The experts at the meeting also made specific recommendations regarding training needs. Implementation of the recommendations will take time and is subject to the availability of adequate resources in the coming biennium.

Climate system monitoring (CSM)

11. During 1991, UNEP continued to provide support for the monitoring of global climate systems, including analyses of temperature and precipitation and of anomalous regional weather events. The CSM project is intended to further the understanding of the behaviour of the global climate system and its variability as a result of natural and human-induced causes. The monitoring programme includes activities designed to observe signs of global warming due to increasing concentrations of greenhouse gases in the atmosphere. The CSM programme continued to issue monthly bulletins containing temperature and precipitation statistics and any anomalies in those data.

12. At a meeting in Shepperton (United Kingdom) from 8 to 11 July 1991, Working Group I of IPCC, developed a timetable for the preparation of a supplement to the IPCC Scientific Assessment Report. The supplement is expected to be ready early in 1992. Working Group II (on the environmental and socio-economic impacts of climate change) and Group III (on response strategies) met in Geneva in August 1991. Group II discussed the prediction of regional climate changes and associated impacts. A task force was set up to identify those regional/national components of monitoring programmes which could be used for climate change impact studies. The Group is expected to report on its findings in 1992. Working Group III identified a need for national climate studies concerning greenhouse gas abatement and UNEP was requested to assist IPCC in compiling national information on country studies. An appropriate questionnaire was sent to all Governments by UNEP and a summary report is being prepared for submission to the next meeting of Group III in February 1992.

13. With financial support from the Government of Switzerland, an Information Unit on Climate Change was established by UNEP in Geneva and started operations in June 1991. The Unit aims to assist national decision makers to improve their knowledge on matters related to climate change, thus enabling them to include climate considerations into development planning. The Unit is to provide a channel for accurate information on all aspects of climate change, including policy choices, for concerted action to meet the challenge of a changing climate.

through organizing expert presentations at key meetings and conferences world-wide; developing group-specific written and visual materials; producing fact sheets on specific issues and trends; and providing multi-media briefings on current international negotiations, such as those on the framework convention on climate change.

World Climate Impact Assessment and Response Strategies Programme

Coordination of climate impact activities

14. Since 1987, UNEP has been carrying out projects in Brazil, South-East Asia, and Viet Nam on the impacts of climate variability on the socio-economic systems of the countries concerned. The purpose of these studies is to demonstrate the applicability of analytical methods to identify potential impacts of climate change and appropriate response options in countries and regions and to encourage their use in other countries. These studies were completed and a series of publications are being issued, specifically: *Case Studies of the Potential Effects of Climate Change*, a summary of project results from Brazil and South-East Asia, published in 1991; a summary report on socio-economic impacts of climate variations and policy responses in Brazil, to be published in 1992; and case studies of climate-related impact assessment in Viet Nam, published in Vietnamese. An International Conference on Climate Change and Sea-Level Rise Impacts was jointly held by UNEP and the Centre for Environment Research, Education and Development in Hanoi from 9 to 10 November 1991. The Conference considered various aspects of climate change and socio-economic problems, sea-level rise and strategy and policy responses both in Viet Nam and, more broadly, in the South-East Asia region. The Conference report is scheduled to be published by UNEP early in 1992.

15. As a means of disseminating knowledge about methodologies for climate impact studies, UNEP continued to conduct roving seminars. In 1991, from 16 to 21 June, a seminar was held in Kariba (Zambia) for 20 participants from Southern Africa. The most significant outcome of the seminar was the development of links between regional investigators of climate impacts and experts from outside the region conducting similar studies, so that a sustained effort towards preparing climate impact studies could be maintained in the region. Similarly, in March 1991 UNEP supported a seminar on drought, organized in Bangkok (Thailand) by the University of Nebraska. Participants from 11 countries in the Asian region made specific recommendations for action by Governments and international organizations to avoid or ameliorate the adverse effects of drought, including the need for a handbook on drought monitoring for use in developing countries. UNEP undertook to support the preparation of the handbook. UNEP also continued to direct a major effort toward sensitizing developing countries to the issue of climate change, its impacts and response options. The last of four regional meetings organized by the Woods Hole Research Institute entitled "Climate Change: Perspectives from the Third World" was held in Bangkok, in June 1991. A conference statement was prepared and issued under the title *Global Warming and Sustainable Development. An agenda for the 1990s*. Previous meetings took place in New Delhi, Sao Paulo and Nairobi.

16. In an effort to catalyse thinking on future climate change, and on its impacts and

responses to them, UNEP supported in 1991 several international conferences on the theme of global warming, among which was an International Conference on Climate Impacts on Environment and Society, held at the University of Tsukuba (Japan) in January 1991. The Conference participants discussed climate monitoring and climate impacts on sensitive sectors of the environment and socio-economic systems and also discussed regional responses to the recommendations of the Second World Climate Conference. A follow-up workshop to identify national research topics was also held in Tsukuba in March 1991. UNEP supported the Houston Advanced Research Centre for Growth Studies in organizing the 1991 Woodlands (United States) Conference "The Regions and Global Warming: Impacts and Response Strategies", which examined the potential for regional actions to deal with climate change within the context of ongoing actions to address other pressing environmental problems, including poverty and economic development. In discussing the need for and the source of economic assistance, the Conference concluded that assisting developing countries in developing sustainably and responding to global climate change was not philanthropy, but enlightened self-interest. Support was also given to the Centre for Resource Management (Utah, United States) to organize, in June 1991, a conference of United States and USSR experts to deliberate on biological aspects of global warming.

17. As in the past, there was continued support for AMCEN Climatology Network. Through the WMO/DARE (Data Rescue) project, historical climatological data currently under threat of being lost through inadequate storage and protection were rescued in the following African countries: Angola, Benin, Burundi, Cameroon, Cape Verde, Central African Republic, Chad, Congo, Côte d'Ivoire, Djibouti, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea Bissau, Madagascar, Mali, Mauritania, Mauritius, Niger, Seychelles, Sierra Leone, Sudan, Swaziland, Togo and Uganda. As the WMO/ECA African Centre of Meteorological Applications for Development (ACMAD) begins to function, it is expected that UNEP support will be provided specifically to develop the climate impacts studies capability within ACMAD, with special emphasis on dealing with periodic regional drought. The establishment of ACMAD follows recommendations of a 1984 Scientific Round Table on Drought and will provide a focus for the climatology network proposed by AMCEN.

World glacier monitoring

18. The World Glacier Mass Balance Bulletin, published in July 1991, contains mass balance measurements for 50 glaciers, based on values reported between 1987 and 1989. Plans are in hand for the preparation of a series of publications - "World Glacier Monitoring - Updates and Assessments". A popular account of glaciers and their significance, to be published in the GEMS library series, is being prepared and is expected to be published in 1992.

Greenhouse gases and global climate change

Intergovernmental Panel on Climate Change

19. In 1991, the mandate of IPPC was extended by both the World Meteorological

Congress (in its resolution 12Cg-XI) and the UNEP Governing Council (in its decision 16/41).

20. At its fifth session, held in Geneva from 13 to 15 March 1991, the Panel agreed on a set of principles to guide its work and decided to take on six specific tasks, with the short-term objective of facilitating the negotiation process for a framework convention on climate change, currently being undertaken by the Intergovernmental Negotiating Committee (INC). In the long term, the results of the studies of the six tasks will contribute to the assessment process of the climate change issue. The tasks entail: assessment of national net greenhouse gas emissions and the establishment of national inventories for such emissions; prediction of regional climate change and associated impacts, including model validation studies; study of issues related to energy and industry; study of forestry-related issues; assessment of vulnerability to sea-level rise; and preparation of emission scenarios. The Panel in 1991 continued to prepare a 1992 supplement to its First Assessment Report (1990) as an input to the INC process.

21. At its sixth session, held in Geneva from 29 to 31 October 1991, interim measures were introduced to increase the participation of developing countries in the activities of IPCC, including its Bureau and working groups. The Panel established a Task Force to examine and make recommendations for the long-term structure of IPCC. It also decided to reconvene during February 1992, *inter alia*, to adopt its 1992 Supplement to the IPCC First Assessment Report.

22. The Working Party on Atmosphere of UNCED met in Geneva from 10 to 11 June 1991. UNEP participated in the deliberations of the Working Party which was charged with the finalization of three papers covering: transboundary air pollution; protection of the atmosphere - cross-sectoral issues; and options for Agenda 21. These documents were the subject of discussions at the third session of the UNCED Preparatory Committee, held in Geneva in August 1991.

23. The UNEP Working Group on the socio-economic aspects of El Niño and Southern Oscillations (ENSO) held its third workshop in Bangkok (Thailand) from 4 to 7 November 1991. The purpose was to identify and discuss some of the speculation about ENSO-climate change interactions. The issue has only been cursorily dealt with in the IPCC assessment, yet as the Working Group observed "the impacts of ENSO are likely to be much greater over the next 50 years than the impacts of global warming". Southern Africa suffered what is possibly the most severe drought in its history during the latter part of 1991. The drought is almost certainly related to the presence of a significant ENSO event. The Working Group considered it likely that ENSO events will continue with climate change and will possibly become more intense and change their frequency of occurrence.

24. In December 1991, UNEP supported an IPCC Workshop on national inventories of greenhouse gas emissions and sinks. The purpose was to discuss and improve methodology for national inventories; to encourage their widespread use by countries participating in IPCC and INC; and to establish procedures and a system for collection, review and reporting of data. A series of case studies in selected developing countries to test the methodology is to be collated and edited by

UNEP in 1992, employing funds generated under the Global Environment Facility. At the same time, national greenhouse costing studies will be undertaken in response to Governing Council decision 16/41, calling for such economic studies to be undertaken on a country by country basis. A study, coordinated by the UNEP Collaborating Centre on Energy and Environment in Denmark, aims to identify data sources for assessments of technical options for reducing greenhouse gas emissions, delineate the macro-economic implications of actions to reduce emissions and assess how present uncertainties in future technology and fuel costs, population growth, etc. affect the potential of the options and their costs.

25. The recommendations of the Second World Climate Conference and the decisions of the UNEP Governing Council at its sixteenth session concerning climate were considered by the Scientific Advisory Committee at its eighth session, held in Budapest (Hungary) in October 1991. At that session, in which UNEP participated, new criteria for project selections were established with the list of priority topics extended to: climate change assessment; coordination of climate impact programmes; methods for impact assessment; monitoring; responses to climate variability and change; and dissemination of information on climate. The Committee also took the opportunity to hear an account of Hungary's experiences in establishing and operating a national climate impacts programme - information likely to be useful for countries wishing to develop similar programmes for inclusion in a future international network of climate impact studies as part of the World Climate Impact Assessment and Response Strategies Programme.

WATER *(Budget line 5201)*

26. The conservation and management of water resources are and will remain crucial challenges for decades to come. UNEP, through its Programme for the Environmentally Sound Management of Inland Waters (EMINWA), made significant progress in 1991.

27. Throughout the year, UNEP continued to assist in the implementation of the Zambezi Action Plan. With financial support from UNEP, the compilation of an inventory of completed, ongoing and planned projects was begun and projects were initiated to develop regional legislation for the management of the Zambezi River and to set up a basin-wide, unified system to monitor water quantity and quality.

28. The final French - and English - language versions of the master plan for the environmentally sound management of the natural resources of the Lake Chad Basin were completed in 1991. The Ministers of Environment of the basin States are to consider the adoption of the plan at their meeting in January 1992.

29. In August 1991, the Executive Director convened an organizational and consultative meeting of government-designated experts of the Nile riparian countries in Nairobi. The experts discussed the terms of reference of the diagnostic study for the Nile Basin and welcomed the UNEP initiative for the elaboration of an action plan for cooperative, environmentally sound and integrated development of the Nile Basin and agreed on a work plan to follow up this initiative.

30. In June 1991, the third meeting of experts for the preparation of the action plan for the rehabilitation of the Aral Sea was held in Alma Ata (USSR). At the meeting, discussion centred on the diagnostic report prepared by national experts. It was agreed that the report should be further revised and submitted to UNEP and to international experts for consideration at the next meeting, scheduled for February 1992.

31. The project for the rehabilitation of the Lake Xolotlan, Nicaragua, which had been signed in 1990, started to be implemented in 1991 by the Instituto Nicaraguense de Recursos Naturales (IRENA). The project aims to bring about a sustainable improvement in the water quality of the lake. In cooperation with the Organization of American States, UNEP is assisting the Governments of Colombia and Venezuela in the preparation of an action plan for the management of the Orinoco Basin.

32. In cooperation with WMO and other organizations of the United Nations system, UNEP worked throughout the year in preparing inputs for the International Conference on Water and Development, to be held in Dublin, Ireland, in January 1992. In addition to supporting the preparation of two keynote papers and one working group paper for the Dublin Conference, UNEP is also supporting the participation of some developing countries, particularly as the Dublin Conference is expected to provide important inputs into UNCED.

33. In cooperation with the International Water Resources Association (IWRA), UNEP provided support to the VII World Congress on Water Resources, held in Rabat (Morocco), in May 1991. Global aspects of freshwater resources development and management were discussed at the Congress. With IWRA and the International Lake Environment Committee (ILEC), UNEP supported a symposium on water resources management held in Otsu (Japan), in November 1991. In cooperation with the International Training Centre for Water Resources Management, UNEP organized in July 1991 a training course on environmentally sound watershed management in Bangkok for 22 participants.

34. Throughout the year UNEP continued to heed the water supply and sanitation problems of nomadic communities. In cooperation with UNICEF, UNEP in 1991 continued its support to a training project in the Samburu region of northern Kenya to teach local Samburu people how to provide themselves with drinking water and sanitation facilities. The training sessions, which placed emphasis on self-help efforts and which were based on the results of discussions with Samburu elders, were completed during 1991.

35. Two activities planned for implementation in 1991 suffered setbacks: a project to assess water resources in the ESCWA region using remote sensing techniques was not implemented in 1991 as planned, owing to the Kuwait conflict. Another project, designed to assess and promote human resources for river water quality management, was delayed due to changes within the supporting organization. However, under this project three consultants were selected and recruited in the last quarter of 1991 to conduct country surveys in Malaysia, the Philippines and Thailand.

TERRESTRIAL ECOSYSTEMS

SOILS *(Budget line 6101)*

36. Recognizing that, to a large extent, the future of a country depends upon the quality and quantity of its soil resources, and that land degradation threatens the life-support system of the earth, UNEP in 1991 repeatedly called upon Governments to address the problems of soil degradation and urged assistance to developing countries in formulating and implementing their national soil policies. Soil degradation affects not only agriculture and forestry, but other sectors of the economy including the manufacturing and commercial sectors. Land degradation can have adverse effects on other sectors: e.g. siltation of dams can reduce the production of energy. The sustainable use of soil resources can therefore bring government ministries and institutions together with land users in a productive partnership, ensuring the enhancement of productivity and the halting of the processes of degradation. Experience has shown that problems related to land degradation cannot be overcome through isolated short-term programmes and projects. To formulate sustainable land use policy, it is important to identify the main issues and problems of soils and land use and their relation to the specific environmental conditions and socio-economic needs. Special attention should be paid to the integration of land use policy with other natural resources within the framework of national development plans.

37. The spectre of soil degradation, bringing decreased productivity and its ensuing dire social consequences is generally recognized. However, its severity, geographical distribution and the total area affected are not precisely known. The World Map on the Status of Human-induced Soil Degradation - produced by UNEP, the International Soil Reference and Information Centre (ISRIC) of the Netherlands and others early in 1991, under the global assessment on soil degradation (GLASOD) project - is the first map of its kind to show from a global perspective the soil degradation that has taken place during the last four decades. The mapped units of the GLASOD map are digitized and hence for any selected region it is possible to estimate the actual area of terrain affected, in terms of type, degree, and causative factor.

38. The map shows that about 15 per cent of the land surface of the earth between latitudes 72° north and 57° south, or 1,964 million hectares, are degraded, of which about 296 million hectares are classified as strongly degraded. Of this latter area, about 113 million hectares have been degraded by the effects of deforestation, and 75 million hectares by the effects of overgrazing. Improper management of agricultural land has resulted in a strongly degraded area of 83 million hectares, where the terrain has lost its productive capacity and is no longer reclaimable at the farm level. The vast majority of the strongly degraded land is located in Africa (124 million hectares) where overgrazing has helped to make water erosion the main destructive factor, and in Asia (106 million hectares) where water erosion - mainly the result of deforestation - salinization and terrain deformation are the factors involved.

39. A much larger area of the land surface - 911 million hectares - is moderately degraded. If restoration of this area is not accomplished soon, at least part of it may become strongly degraded in the near future. Rehabilitation efforts are therefore needed to save such soils

from further degradation. Water erosion, due to various causes accounts for about 56 per cent of the total global degradation of soils, and wind erosion accounts for about another 28 per cent. A total of 66 per cent of the global loss of topsoil through wind and water erosion occurs in Asia and Africa. More explicit data can be found in Figure 1.

40. The serious shortage of scientists and technicians skilled in developing methods and implementing programmes related to soil monitoring and assessment has led to UNEP's involvement in educating and training specialists and developing soil monitoring and assessment programmes. In 1991, UNEP, in collaboration with ISRIC and the International Society of Soil Science (ISSS) continued to execute regional pilot projects with the main objectives of: (a) developing or adopting internationally compatible methodologies to assess the status, rate and risk of soil degradation, based on computerized soils and terrain database compilation and interpretation; and (b) developing an information system that can deliver accurate, useful and timely information on soils and terrain resources for decision makers and policy makers.

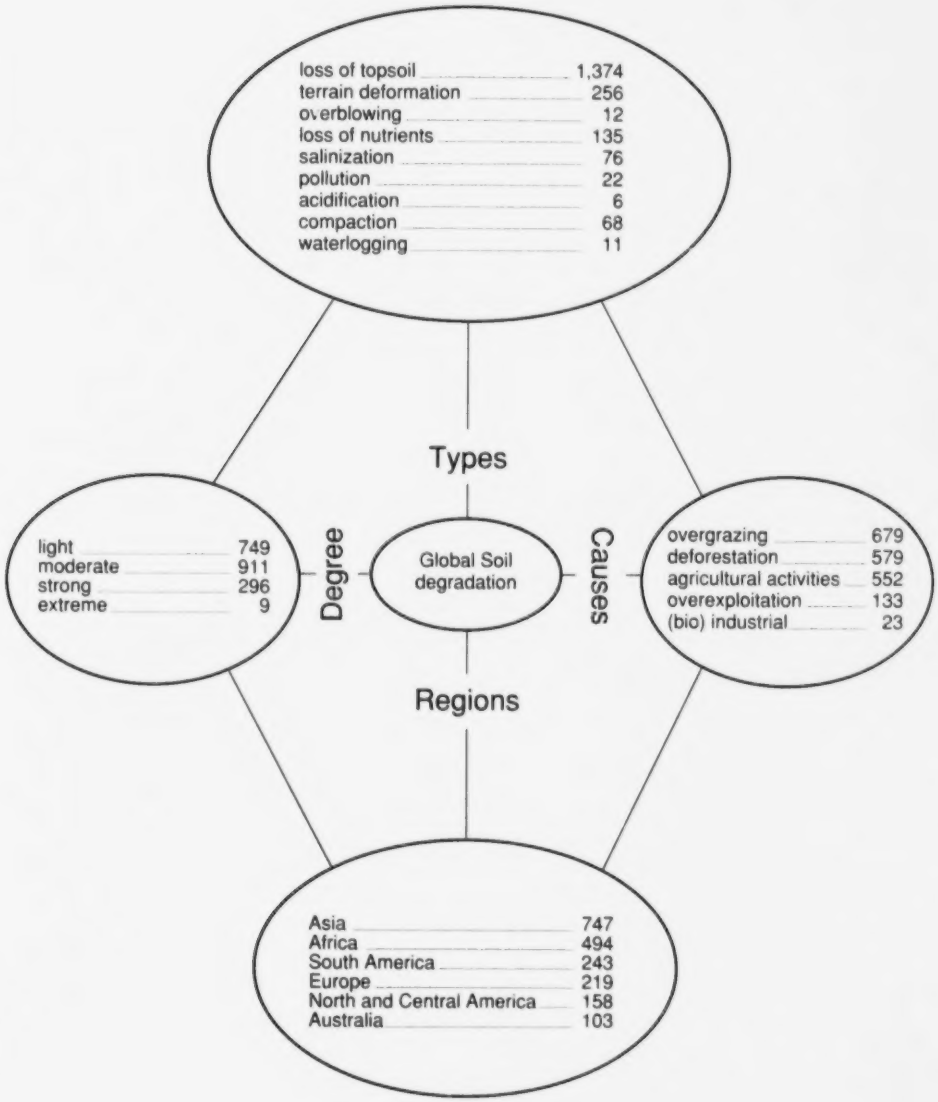
41. Under the Plan of Action for the Implementation of the World Soils Policy, the methodology of the World Soil and Terrain Digital Database (SOTER), developed and elaborated under the GLASOD project with a scale of 1:1 million, was successfully tested in 1991 in three pilot areas: LASOTER (UNEP-funded, covering portions of Argentina, Brazil and Uruguay); BRASOTER (self-funded, covering the geo-economic region of Brasilia: a 23 million ha); and NASOTER (self-funded, covering portions of Canada and the United States). The procedures manual for SOTER methodology has been revised and refined several times, on the basis of experiences gained in the above-mentioned pilot areas. A SOTER database structure has also been developed, linked to a Geographic Information System (GIS).

42. Although further upgrading and refinement of the SOTER methodology will continue to suit it to different ecological and environmental conditions, SOTER can now be easily established, through the provision of some institutional support, as an almost routine operation. As its establishment involves the installation of an already developed system, there is little risk that a newly established SOTER will fail to deliver the planned outputs. The SOTER methodology can now be applied in priority areas around the world, and several Governments in West and East Africa, central Europe and South-East Asia have shown strong interest in developing an environmental database using the SOTER approach. SOTER priority regional pilot areas already identified are: (a) WASOTER, covering West Africa (parts of Benin, Burkina Faso, Ghana, Niger, Nigeria and Togo); (b) CESOTER, covering central Europe (parts of Austria, Czechoslovakia, Hungary and Poland); and (c) EASOTER, covering East Africa (parts of Kenya, Uganda and the United Republic of Tanzania).

43. To apply and implement the World Soils Policy and the World Soil Charter, in 1991 UNEP and FAO, in collaboration with ISSS continued to assist developing countries in the formulation of national soils policies (NSP). National soils policies for the Syrian Arab Republic and Uganda were finalized in April 1991 and submitted to the respective Governments for clearance. The Syrian NSP was cleared and is currently in print. The

Figure 1

Global assessment of soil degradation showing types, causes, regions and degree of soil degradation in millions of hectares



policies suggested in the documents are meant to be indicative rather than exhaustive in character, and are by no means a substitute for local experience, foresight or prudence.

44. In cooperation with UNEP, the Finnish International Development Agency (FINNIDA) lent its support to the AMCEN's Soils and Fertilizers Network in organizing training workshops on soil and water conservation and management for Western Africa. A soil conservation workshop was held in Gambia in April 1991 with the participation of 20 extension workers from Gambia, Ghana, Nigeria and Sierra Leone. A similar workshop is planned for the French-speaking West African countries in the 1992-1993 biennium.

45. With financial support from the Government of the Netherlands, the National Soil Reference Collections (NASREC) technical assistance programme continued during the year under review. The goal, to be achieved by the end of 1992, is the establishment of NASREC in six countries: Cuba, Nigeria, Pakistan, Peru, Senegal and Zimbabwe. Each NASREC will consist of exhibitions of soil monoliths, soil profile databases and publications on the reference soils and their ecological settings. Trainers, extension workers and researchers will be the end users of such materials.

46. There was continued cooperation throughout 1991 with the USSR Commission for UNEP (UNEPCOM) in the implementation of two projects. Under the first, involving training in land resource data collection and analysis for land use planning in Zambezi River Basin countries, five experts recruited through UNEPCOM undertook field investigations on test areas in Zambia during June-July 1991. Along with satellite images and aerial photographs, these field data will provide material for the training of experts from the Zambezi River Basin countries in land use planning. Another field mission, undertaken in December 1991, verified data obtained by processing the satellite images and aerial photographs. Under the second project, on rehabilitation of saline soils in the Euphrates Basin in the Syrian Arab Republic, experts prepared two documents: *Guidelines for Practical Methods of Land Development and Rehabilitation of Saline Soils in the Euphrates Basin*; and *Analysis of Ecological and Socio-economic Impacts of Irrigated Lands Salinization in the Euphrates Basin*. The documents are to be reviewed and published in 1992.

47. Together with Unesco, the International Union of Biological Science and the Commission of the European Communities (CEC), in January 1991 UNEP co-organized a workshop in Nairobi on economic driving forces and constraints of savannah land use. At the workshop, attended by 26 specialists, discussion covered various aspects of land use constraints in the savannah and 12 case studies from Africa, Asia, and Latin America were examined. UNEP also co-organized the 7th Triennial Conference of the Association of Faculties of Agriculture in Africa at UNEP headquarters in June 1991. The theme of the Conference, which was attended by 53 participants, was "Advances of agricultural research in Africa".

48. Within the UNCED preparatory process, UNEP actively participated in the 1990 meetings of the UNCED Working Party on Land and Agriculture (WPLA) in Geneva and Rome and as follow up in 1991 provided extensive reviews and comments to the WPLA

draft documents "Sustainable Production Systems", and "An Integrated Approach to the Conservation, Management and Use of Land Resources". As mandated by Governing Council decision 15/24, UNEP played an active role in the elaboration of the FAO "Agenda for Action on Sustainable Agriculture and Rural Development", to be presented to UNCED.

49. In implementing Governing Council decision 16/17, UNEP worked closely, under the United Nations Inter-agency Plan of Action for ROPME Region, and produced three technical reports on the assessment of the impacts of the Iraq-Kuwait conflict on terrestrial ecosystems in Iraq, Kuwait and Saudi Arabia.

ARID LANDS AND DESERTIFICATION (*Budget line 6201*)

50. In 1991, UNEP prepared two major reports in response to General Assembly resolution 44/172 A of 19 December 1989 on implementation of the Plan of Action to Combat Desertification (PACD). The first, on the status of desertification and implementation of the PACD described progress in implementing the PACD during the period 1978-1991; listed the results of the assessment of the current global status of desertification; and outlined policy guidelines and a course of action to combat desertification as well as to finance the Plan. The report will be submitted to the Governing Council at its Third Special Session in February 1992 under the symbol UNEP/GCSS.III/3. The second report, on finance studies, contains relevant technical chapters on modalities for financing the PACD. Before finalizing the two reports, they were extensively reviewed by senior consultants at a series of specially convened meetings, by IAWGD at its 18th meeting in Geneva on 9 and 10 September 1991, and by the eighth session of the Consultative Group on Desertification Control (DESCON) on 11 and 12 September 1991, in Geneva. In response to the General Assembly request that the reports be presented, through the UNCED Preparatory Committee, as major contributions to the discussion on desertification at UNCED in 1992, UNEP transmitted the reports to the UNCED secretariat prior to the fourth Preparatory Committee.

51. The data contained in the above-mentioned reports show that land degradation in the drylands remains a world-wide problem that cause socio-economic and ecological damage in many parts of all continents and that has global impacts on food security, climate and biodiversity. Throughout the reports it is emphasized that combating the serious threat of desertification demands serious attention and significant financial and human resources. In 1980 losses in dryland productive capacity were estimated at $26 billion per year/the current reports, based on more realistic figures in 1991, show that loss of income due to land degradation has increased to $42.3 billion per year (see Table 1). Similarly, the costs of corrective and rehabilitation measures for degraded drylands are currently estimated to range between $8.6 billion and $18.2 billion per year, excluding preventive measures.

52. During the past two bienniums, 1988-1989 and 1990-1991 intensive activities to assess desertification were carried out by UNEP, in collaboration with regional and national research centres. The assessments contributed to the preparation of the report on the status of desertification and

implementation of the PACD above. Another significant output of the overall assessment but also recognizes the impact of physical, chemical and biological factors. In this context

Table 1

Annual average loss of income (in millions of US$)

Continent	Irrigated Land	Rainfed Cropland	Rangeland	Total
Africa	475	1 855	6 966	9 296
Asia	7 953	4 647	8 313	20 913
Australia	63	544	2 529	3 136
Europe	474	450	564	1 488
North America	1 465	441	2 878	4 784
South America	355	252	2 084	2 691
Total	10 785	8 189	23 234	44 308

activities was the preparation of national and regional case studies for the World Atlas of Desertification, containing global, regional (for Africa) and local maps of the status of desertification and its causative factors. The case studies presented in the Atlas are representative of regions affected by desertification in all the continents. It is intended that the World Atlas of Desertification will be officially launched on the occasion of UNCED and distributed commercially throughout the world.

53. For the purposes of the above assessment, desertification has been defined as "land degradation in arid, semi-arid and dry sub-humid areas, resulting mainly from adverse human impact, but not including areas which are already considered hyper-arid deserts." This definition emphasises the anthropogenic causes of dryland degradation, the assessment has revealed that at present desertification directly affects about 3.6 billion hectares or about 70 per cent of total drylands (see Table 2). The assessment confirms that the most obvious symptoms of the desertification process relate to a reduction of biological and economic productivity and value of land and to increased pollution of water and air.

54. During 1991, UNEP entered into agreements with ECA, ESCWA, ESCAP, UNDP, ECOWAS, FAO, SADCC, the Argentine Institute for the Study of Arid Zones, the Peruvian National Office for Natural Resources Evaluation and the Centre for International Projects with a view to carrying out a wide range of activities in the implementation of the PACD, including assistance to Governments in formulating national and regional plans of action for

combating desertification and in coordinating such action plans and related training activities.

institutional and programme support to assist 22 Sudano-Sahelian countries in the

Table 2

Global status of desertification/land degradation in agriculturally used drylands

Continent	Irrigated lands			Rainfed Cropland			Rangeland			Total Agriculturally used Drylands		
	Total m.ha	Degraded m.ha	%	Total m.ha	Degraded m.ha	%	Total m.ha	Degraded m.ha	%	Total m.ha	Degraded m.ha	%
Africa	10.42	1.90	18	79.82	48.86	61	1 342.35	995.08	74	1 432.59	1 045.84	73.0
Asia	92.02	31.81	35	218.17	122.28	56	1 571.24	1 187.61	76	1 881.43	1 311.70	69.7
Australia	1.87	0.25	13	42.12	14.32	34	657.22	361.35	55	701.21	375.92	53.6
Europe	11.90	1.91	16	22.11	11.85	54	111.57	80.52	72	145.58	94.28	64.8
North America	20.87	5.88	28	74.17	11.61	16	483.14	411.15	85	578.18	428.62	74.1
South America	8.42	1.42	17	21.35	6.64	31	390.90	297.75	76	420.67	305.81	72.7
Total	**145.50**	**43.15**	**30**	**457.74**	**215.56**	**47**	**4 556.42**	**3 333.46**	**73**	**5 159.66**	**3 562.17**	**69.0**

This approach in implementing the PACD appears to be more cost-effective, in view of the limited resources available to UNEP and is particularly suited to strengthening the thematic joint programming activities within the framework of the Inter-agency Working Group on Desertification (IAWGD). Following the positive outcome of the external evaluation of the operations of the UNEP/UNDP/UNSO joint venture, carried out in 1990 (and reported to the sixteenth session of the Governing Council in document UNEP/GC.16/16/Add.1), UNEP continued during 1991 to provide funding to UNSO for implementation of the PACD.

55. Under a two-year memorandum of understanding between ESCWA, FAO, and UNEP, assistance was provided to the Governments of Bahrain, Oman, the United Arab Emirates and Yemen to prepare national plans of action to combat desertification. The final draft of the Yemen National Plan for Combating Desertification was published in Arabic in 1991. Preparatory activities were also initiated in Oman for the formulation of the national plan within the framework of the existing National Conservation Strategy,

presently under preparation with the assistance of IUCN. In Bahrain and the United Arab Emirates, background studies for the preparation of the national plans were initiated in 1991.

56. Under the plan of action for integrated land use planning in the Kalahari/Namib area finalized in 1990, a number of country projects for land use planning and resource management were prepared in 1991 and costed at $11 million. Thus providing an important framework within which IAWGD and other donors can mobilize technical and financial assistance for the SADCC countries' anti-desertification programme. During 1991 the Netherlands and the Norwegian Agency for International Development (NORAD) funded some of the pilot parts of the programme. In view of the programme's global dimensions, on its direct relationships to biodiversity and climatic impacts, SADCC has presented the programme through UNDP, for consideration for funding under GEF.

57. In Peru the national plan of action for combating desertification was prepared with UNEP technical assistance provided through the National Office for Natural Resources Evaluation (ONERN). A national seminar was held in May 1991 to review the action plan and the 22 project proposals attached to it. Arrangements to identify priority projects and to determine funding requirements for their implementation are being followed up by ONERN.

58. The draft national plan of action to combat desertification for Mongolia was prepared with UNEP financial assistance through the Centre for International Projects in 1991. Three major projects were identified under the plan and there are proposals to elaborate them for implementation during 1992-1993.

59. In collaboration with ECA and UNDP, in 1991 UNEP provided technical assistance to ECOWAS (under the UNDP/ECA Assistance Programme) in assessing desertification control efforts in the subregion and in preparing a plan for strengthened coordination of support programmes. UNSO also participated in the implementation of this activity, which is expected to be completed before UNCED in 1992.

60. In connection with the AMCEN Programme, UNEP continued to provide assistance to African Governments in implementing village pilot projects. During 1991, pilot projects for sustainable food, fodder and fuel production involving popular participation and focusing on women in development were under implementation in Djibouti, Egypt, Ghana, Uganda, Zaire and Zimbabwe with funding support from AGFUND, UNDP, UNSO, WFP and the Canadian International Development Agency (CIDA). UNEP also provided assistance to the Governments of Mozambique and the United Republic of Tanzania in formulating new project proposals for development under AMCEN. A training workshop on eco-farming for project managers of pilot projects, organized in 1990, in collaboration with the Government of China, for 18 participants from eight African countries, was followed up by another seminar held in Accra (Ghana) from 5 to 8 November 1991 organized in collaboration with the Governments of China and Ghana, with participants drawn from English-speaking countries of Africa.

61. In 1991, UNEP continued to provide secretariat support to the AMCEN Deserts

and Arid Lands Committee (ADALCO) in its preparation of a subregional programme for ecological rehabilitation of some Sahelian countries, with the participation of national experts from Gambia, Guinea and Mali. A Master Plan for Development of the Nubian sandstone aquifer for Combating Desertification in North-East Africa was presented for Chad, Egypt, Libyan Arab Jamahiriya and Sudan. Preparation of an action programme for cooperative efforts to control savannization in the Central African Subregion was undertaken by the ADALCO National Focal Points in 1991 and a report "Programme of Co-operation Against Savannization and Sahelization in the Central African Sub region" was drafted and submitted to Governments for consideration.

62. During 1991, UNEP organized training courses on various aspects of combating and controlling desertification in cooperation with UNEPCOM, the Instituto Argentino de Investigaciones de las Zonas Aridas (IADIZA), SADCC, ESCAP, IAWGD and the Arab Centre for the Study of Arid Zones and Dry Lands. Training was conducted on a regional basis for a total of 79 specialists from developing countries.

63. Under the publications programme, the *World Desertification Bibliography Database*, containing 3,897 entries through 1988, was prepared by UNEP in collaboration with the Office of Arid Lands Studies of the University of Arizona and was published in 1991 for distribution to international and regional training and research institutions, libraries, government environmental agencies, universities, etc. The proceedings of an Ad Hoc Consultative Meeting on the Assessment of Desertification, organized by UNEP in Nairobi in February 1990, were published in English under the title *Desertification Revisited* and a total of 500 copies were distributed. In 1991, issues number 18 and 19 of the Desertification Control Bulletin were published in English and a total 5,600 copies were distributed world-wide.

FOREST AND OTHER ECOSYSTEMS (*Budget line 6102*)

64. During 1991 the forests of the world were the subject of continuous discussion, notably at the sessions of the UNCED Preparatory Committee, at the meetings of its working party on forestry, and at the Tenth World Forestry Congress, held in Paris in September 1991. UNEP fully participated in these activities. Important aspects of the discussions focused on a possible global forest agreement or convention, suggested by FAO, or on the development of principles of forestry management. One major concern has been the apparent dwindling of forests. For example, figures from the FAO Forest Resources Assessment for 87 countries in the tropical regions show a loss of 16,900 ha in 1981-1990 (see Table 3) as compared to a loss of 9,200 ha for the same countries in 1976-1980, according to a 1980 FAO/UNEP assessment.

65. Concern for the disappearance of forests globally has resulted in several suggestions for large-scale reforestation programmes, also as a means to mitigate the increase in atmospheric carbon dioxide and global warming. To prevent any detrimental environmental effects from such large-scale programmes, UNEP, together with IUCN, started preparation in 1991 of a set of guidelines on the environmental implications of large-scale reforestation programmes.

66. The revision of the Tropical Forestry Action Plan (TFAP), administered by FAO, was the subject of a number of meetings in 1991 in which UNEP participated. UNEP also took part in the TFAP Forestry Advisers Group and in discussions with the TFAP Coordination Unit on the subject of TFAP activities in different countries. The final form of the TFAP is still inconclusive. The FAO Council of Ministers had recommended the formation of an ad hoc group on the TFAP, to study the proposal for a new mechanism. UNEP is a member of this group and participated in all its deliberations.

Table 3

Preliminary estimates of forest area and rate of deforestation for 87 countries in the tropical regions (revised 15 October 1991)

SUBREGION	NUMBER OF COUNTRIES STUDIED	TOTAL LAND AREA *	FOREST AREA 1980 *	FOREST AREA 1990 *	AREA DEFORESTED ANNUALLY 1981-1990 *	RATE OF CHANGE 1981-1990*
			(thousands of ha)			per cent per annum
LATIN AMERICA	**32**	**1 675 700**	**923 000**	**839 900**	**8 300**	**- 0.9**
CENTRAL AMERICA AND MEXICO	7	245 300	77 000	63 500	1 400	- 1.8
CARIBBEAN SUBREGION	18	69 500	48 800	47 100	200	- 0.4
TROPICAL SOUTH AMERICA	7	1 360 800	797 100	729 300	6 800	- 0.8
ASIA	**15**	**896 600**	**310 800**	**274 900**	**3 600**	**- 1.2**
SOUTH ASIA	6	445 600	70 600	66 200	400	- 0.6
CONTINENTAL SOUTH-EAST ASIA	5	192 900	83 200	69 700	1 300	- 1.6
INSULAR SOUTH-EAST ASIA	4	258 100	157 000	138 900	1 800	- 1.2
AFRICA	**40**	**2 243 400**	**650 300**	**600 100**	**5 000**	**- 0.8**
WEST SAHELIAN AFRICA	8	528 000	41 900	38 000	400	- 0.9
EAST SAHELIAN AFRICA	6	489 600	92 300	85 300	700	- 0.8
WEST AFRICA	8	203 200	55 200	43 400	1 200	- 2.1
CENTRAL AFRICA	7	406 400	230 100	215 400	1 500	- 0.6
TROPICAL SOUTHERN AFRICA	10	557 900	217 700	206 300	1 100	- 0.5
INSULAR AFRICA	1	58 200	13 200	11 700	200	- 1.2
TOTAL	87	4 815 700	1 884 1001	714 800	16 900	- 0.9

*Figures may not tally due to rounding.

67. During the year under review, UNEP continued its efforts to help develop methodologies to assess the real value of forests. Such methodologies have been prepared by the Forestry for Sustainable Development Programme of the University of Minnesota, in cooperation with UNEP, FAO, the World Bank and the Oxford Forestry Institute (United Kingdom). The result will be a set of manuals, which is expected to be available in 1992. A sub-set of the manual was already tested during a training course in Oxford on 5 and 6 September 1991.

68. The integrated pilot project on environmental management and protection of Andean Ecosystems in Cajamarca (Peru) was continued during the year, with support from the Government of Germany and local institutions. Within this large-scale project, farmers and others are encouraged to carry out activities for soil conservation and management, afforestation, irrigation and tree nursery management. The project was evaluated in December 1991 and the findings showed that it had made major contributions to the environmental management of Andean mountain ecosystems. It was recommended that the results of the project be consolidated and systematized and used to extend the project and expand its geographic scope to produce a programme for the integrated management of Andean mountain ecosystems.

69. The AMCEN Committee of Forests and Woodlands met from 15 to 17 January 1991 and extensively discussed the situation of forests in Africa. As a result of an initiative of the Committee, a television film on the Mpingo tree (African ebony) of the United Republic of Tanzania was produced by the UNEP-supported Television Trust for Environment (TVE). The Committee also supported in 1991 participants to the following courses: a training course on statistical methods and experimental design, organized by the International Union of Forestry Research Organizations (IUFRO) in Vienna (Austria) from 16 September to 30 October 1991; and a course on agroforestry research for development, organized by the International Council for Research in Agroforestry (ICRAF) in Nairobi from 14 October to 1 November 1991. In cooperation with ICRAF, a compilation of proceedings on agroforestry in arid and semi-arid lands was finalized.

70. In 1991, there was continued cooperation between UNEP and the Centro para el Desarrollo Forestal (CEDEFOR) of Chile in a successful programme of lectures and training courses in forest conservation. The programme, which applied to different river basins, is directed towards young people, students and local farmers. During 1991, the activities of the programme focused on the Rapel and Mataquito Basins.

71. Throughout the year, the studies on the bioproductivity of tropical savannahs that UNEP has carried out since 1984, in cooperation with King's College, London, were further continued. In cooperation with the College, UNEP helped finalize a synthesis report on the research, for publication in 1992, entitled "Primary Productivity of Grass Ecosystems of the Tropics and Subtropics". In the series of UNEP/King's College training courses, a tenth course was held at the University of the West Indies in Barbados in August 1991. The 27 participants, young scientists from the Caribbean region, were trained in laboratory and field measurement of photosynthesis and bioproductivity. Research work in cooperation with King's

College in 1991 began to study the effects of a possible climate change on tropical savannahs and whether tropical savannahs would increase their uptake of carbon if the carbon dioxide content of the atmosphere were to increase.

BIOLOGICAL DIVERSITY AND PROTECTED AREAS
(Budget line 6105)

72. Renewable resources such as plants, animals and microorganisms are the foundation of human civilization. Throughout human history, a total of 7,000 species of plants have been grown or collected for food. Of these, 20 species at present supply 90 per cent of the world's food, and just three - wheat, maize and rice - supply more than half. In most parts of the world, these few crops are grown in monocultures, which are particularly sensitive to insect attack and disease. Yet the vast majority of species remain unused, and those that are utilized or otherwise affected by human activities remain a matter of increasing concern. So far, only about 1.4 million species of plants, animals and microorganisms have been identified and described, although the total may well exceed 80 million (see figure 2).

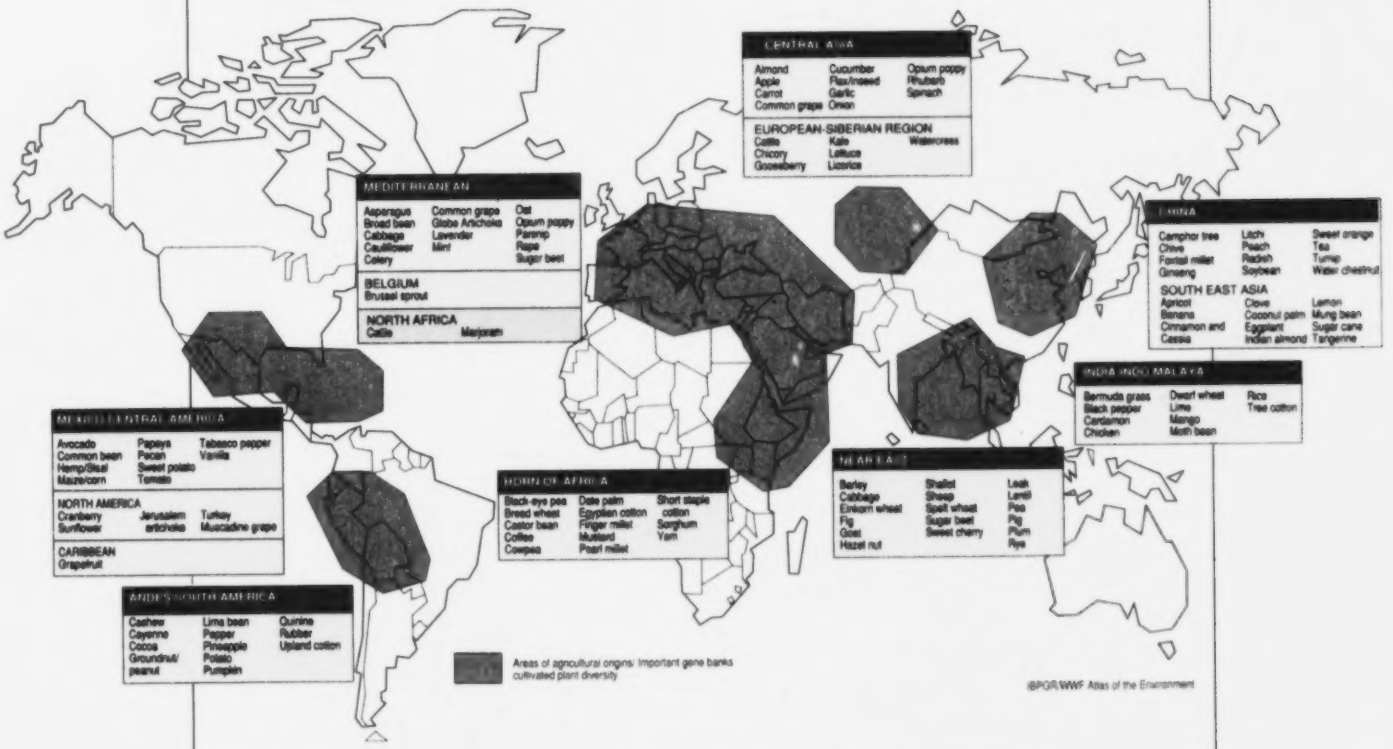
73. Biological diversity is the variety and variability of life. It consists of the world's genes, species and ecosystems. The case for conserving this diversity is well established, on economic as well as scientific grounds. Biodiversity is essential for sustainable development, adaptation to a changing environment, continued functioning of the biosphere and human survival. But available evidence indicates that human activities are now leading to the loss of the planet's biodiversity, and as a consequence are eroding resources essential for future development. Species extinctions have increased steadily since 1600 and scientists speculate that extinctions are now at an all-time high; further increases are to be expected in the coming years. Some predict that, if present trends continue, up to 25 per cent of the world's species will be doomed to extinction in the next few decades, accompanied by an equally alarming degradation of habitats and ecosystems. The lack of sound national and global biodiversity strategies and action plans, adequate trained manpower and adequate funding to protect and manage biodiversity are major impediments to conservation.

74. As a follow-up to the publication in 1980 of the *World Conservation Strategy - Living Resource Conservation for Sustainable Development*, UNEP, IUCN and the World Wildlife Fund (WWF) jointly prepared and published its successor, entitled *Caring for the Earth - A Strategy for Sustainable Living*, which was launched in over 60 cities worldwide on 21 October 1991. The strategy, a culmination of three years of intensive review by Governments, scientists and conservation experts, provides a new action plan for living sustainably, from the top levels of Government to the level of the individual, by listing 132 priorities for action that communities can take to safeguard or improve their environments, while increasing their quality of life. *Caring for the Earth* is intended for use by those who shape policy and make decisions that affect the cause of development and the condition of our environment.

75. During 1991, UNEP, jointly with the World Resources Institute (WRI) and IUCN, developed and published the *Global Biodiversity Strategy: Guidelines for Action*

Figure 2

The genetic origins of some selected crops and livestock



to Save, Study and Use Earth's Biotic Wealth Sustainably and Equitably as a subset to *Caring for the Earth* and an elaboration of the World Conservation Strategy, launched in 1980. The document is based on substantive research, technical workshops and regional consultative meetings. FAO, UNESCO, the International Board for Plant Genetic Resources (IBPGR), and other key international organizations, along with 45 other governmental and non-governmental institutions from around the world, participated in the elaboration of the strategy. Scheduled for release in February 1992 at the fourth World Congress on National Parks and Protected Areas, Caracas, Venezuela, the *Strategy* complements *Caring for the Earth* by addressing the biodiversity issue in depth, and has been provided in draft form to the UNCED Secretariat and the INC for a Convention on Biological Diversity to support their efforts. The Global Biodiversity Strategy attempts to stimulate and implement action locally, nationally, and internationally, consistent with the principles, strategic elements and broad agenda for action contained in *Caring for the Earth*.

76. The *Global Biodiversity: Status of the Earth's Living Resources* was compiled in 1991 by the World Conservation Monitoring Centre (WCMC) and will be published in 1992 as a contribution to the joint UNEP/WRI/IUCN Biodiversity Programme. UNEP is a co-sponsor of WCMC, together with IUCN and WWF. The report represents a first comprehensive overview of the status, use and management of global biological diversity, and provides the objective data and analysis for the implementation of *Caring for the Earth* and its subset, the *Global Biodiversity Strategy*. It is expected to play a significant role in assisting delegations of the INC in their deliberations. The Ecosystem Conservation Group at its eighteenth General Meeting in Geneva in September 1991 also reviewed and endorsed *Caring for the Earth*, the *Global Biodiversity Strategy* and *Global Biodiversity*.

77. Various estimates have been made on the financial cost of global biodiversity conservation, ranging from $500 million to $50 billion per year. Initial cost estimates to meet eight priority conservation areas identified by the Ad Hoc Working Group of Experts on Biological Diversity suggest that one to ten billion dollars are needed over the next 10 to 15 years - clearly beyond the level of existing multilateral and bilateral assistance provided to developing countries for conservation of biodiversity.

78. In 1991, UNEP initiated the preparation of a number of country studies on status, costs, benefits and unmet needs of biodiversity conservation and sustainable use of its components, within the context of the draft convention on biological diversity currently under negotiation. The preparation of these studies was recommended by the INC for a Convention on Biological Diversity, to assist in arriving at a realistic and more accurate assessment of total costs, benefits and unmet financial needs of global biodiversity conservation and rational use of national biological resources by Governments. In addition, UNEP continued to provide secretariat support and prepared a number of technical reports and background documents for INC meetings, and supported the participation of developing countries in the meetings of INC.

79. The primary objective of the country studies is to assist national Governments to

identify, in the light of social, economic, environmental and other objectives, the basic needs and levels for effective conservation, including rational use of national biodiversity, and the necessary supportive measures and costs to meet those needs, as well as the benefits associated with the implementation of these measures.

80. To ensure uniformity and common understanding in the preparation of the country studies, a set of guidelines was drafted by the UNEP secretariat and reviewed and finalized by a panel of experts, hosted by the Government of Canada, in April 1991. A Steering Committee and a multidisciplinary team of experts were established under the auspices of UNEP to provide advice and guidance, as appropriate and upon request, to individual countries on any aspect of the preparation of the studies.

81. Conventional as well as new technologies can play a major role in the conservation and sustainable use of biological diversity. Research efforts identify new applications daily. However, many profitable technologies and techniques are not being effectively applied, particularly by developing countries in which biodiversity is largely located, for lack of effective mechanisms for technology transfer. As technology transfer is currently the concern of the INC for a Convention on Biological Diversity, UNEP prepared two technical reports for the INC meetings "Description of transferable technologies relevant to conservation of biological diversity and its sustainable use" (UNEP/Bio.Div./WG.2/2/10) and "A note clarifying a clearing house mechanism on transfer of technology and technical cooperation" (UNEP/Bio.Div./WG.2/3/5). The reports describe the role of technology transfer in conserving biodiversity and its sustainable use and suggest ways to assist countries in identifying the scope and mechanism for mutual partnership and technical cooperation.

82. Both developing and developed countries share a desire to protect and conserve representative samples of their most characteristic or striking ecosystems and the rare plants and animals which they contain. Conservation may be *in situ*, in which case careful consideration has to be given to precisely which areas are the most appropriate for designation as protected areas and the extent to which access to usage of these areas are compatible with maintaining viable populations of the species they are intended to conserve. Alternatively, conservation may be *ex situ*, for example as living collections in botanic gardens or as seed collections in gene banks, which are then grown as required. The effective design and implementation of conservation programmes require a basic expertise in plant taxonomy and ancillary topics which, in the estimation of many of the international agencies concerned with conservation, has hitherto not been provided by short-term training courses. With support from UNEP and IUCN, a three month training course (January - April 1991), linking theoretical aspects of conservation with practical applications, was offered to 24 candidates by the School of Plant Sciences, University of Reading (United Kingdom).

83. In 1991 UNEP continued to support IBPGR, whose global network of gene banks houses the world base collection of crop germplasm. Collaboration continued between UNEP and FAO in the area of conservation and management of animal genetic resources.

84. In the South Pacific region, there are currently at least 54 endangered bird species and many plant and marine animals are either endangered or threatened. There are also many examples of loss of ecosystems and habitats. The South Pacific Regional Environment Programme (SPREP) is working with UNEP to stop this trend and to coordinate the South Pacific input into the process of developing a biodiversity convention. A joint UNEP/SPREP biodiversity convention and conservation programme workshop was organized in Port Vila (Vanuatu) from 24 to 28 October 1991 to, *inter alia*, increase awareness amongst the South Pacific countries of recent global and regional biological diversity conservation initiatives and issues.

85. In Latin America and the Caribbean, UNEP, in cooperation with FAO, supported in 1991 various technical activities in the implementation of the joint project "Wildlands, Protected Areas and Wildlife Management in Latin America and the Caribbean". The many technical workshops supported by UNEP and FAO in 1991 contributed to the fulfillment of training requirements in the region and thus strengthened regional professional and technical capacities and facilitated the coordination of activities. There were numerous technical exchanges of expertise and information among the countries in the fields of development of conservation strategies, planning of national parks, management of border parks, management of wildlife and service training. Under the UNEP/FAO project, manuals and guidelines for the management of wildlands, protected areas and wildlife were prepared for decision makers, planners, managers and technicians in the region. An information-exchange bulletin on the same subject areas was also published.

86. Within the programme to implement the Action Plan for Biosphere Reserves, a number of activities were undertaken in 1991, including a UNEP/UNESCO training course for fifteen biosphere reserve managers in English-speaking African countries, held in Kenya, from 10 to 22 January 1991. The course was to build up a cadre of managers trained in planning and managing biosphere reserves and other protected areas. Under the training course, a training manual for biosphere reserve planning and management was produced for distribution to African Governments, national institutions, and biosphere reserve managers.

87. UNEP, jointly with UNEPCOM and in consultation with UNESCO, launched in 1991 an assessment of the international biosphere reserve network, initially in the USSR, South-Asia (India), East Asia (China) and the Americas, to ascertain to what extent the structure and activities of such reserves conformed to the concept of biosphere reserves. The aim was to develop a methodology for assessing the international biosphere reserve network and preliminary guidelines for managing and setting standards for biosphere reserves. It is expected that the project will contribute to improving the biosphere reserve network and implementing the Action Plan for Biosphere Reserves.

88. In 1991, UNEP in collaboration with the Scientific Committee on Problems of the Environment (SCOPE) and in association with UNEPCOM, the USSR Academy of Sciences and UNESCO, held a Workshop entitled "Managing Ecotones in a Changing Environment" in Pushchino (USSR) from

3 to 5 December 1991. The workshop, the third in a series, comprehensively reviewed information on the ecology of ecotones (marine, terrestrial, coastal and intertidal ecosystems) with a view to improving their management for the conservation of biological diversity.

89. During the year under review, UNEP, jointly with the Smithsonian Tropical Research Institute, began an assessment of biological diversity and micro-climate of the tropical forest canopy. The aim of the project is to contribute to a better understanding of the canopy ecology and biology of the endangered tropical rain forest, and to solving the problems of managing and protecting it, protecting the canopy's biodiversity, and understanding the interactions between tropical forests and the atmosphere.

90. In September 1991, the Third Meeting of the Conference of the Parties to the Convention on the Conservation of Migratory Species of Wild Animals (for which UNEP provides the secretariat) was held in Geneva with the participation of some 100 specialists in migratory species together with government experts. The meeting considered more than 30 proposals to amend the species lists, including those arising from the global review of the conservation status of small cetaceans carried out by the Scientific Council. A newly reconstituted Standing Committee was requested to prepare a strategy for future development of the Convention, and to decide upon recommendations for enhancing the participation of developing countries in the activities under the Convention. In association with the meeting, the Final Acts of two intergovernmental agreements were concluded on European bats and on small cetaceans in the Baltic Sea and the North Sea.

91. In 1991, UNEP continued to provide the secretariat for the Convention on International Trade in Endangered Species of Wild Fauna and Flora. UNEP also continued to provide secretariat services to the Ecosystem Conservation Group (ECG), comprising, besides UNEP, also FAO, UNESCO, IUCN, WWF and UNDP with the World Bank, UNCED, WCMC, IBPGR and WRI as observers. Since its establishment, the Group has provided a forum for cooperation and coordination among the major United Nations and other international organizations dealing with the problems of nature conservation and national resources management. A total of eighteen general meetings have been held to date in addition to a number of specialized meetings.

MICROBIAL RESOURCES AND RELATED BIOTECHNOLOGIES

(Budget line 6106)

92. In 1991, the network of Microbiological Resources Centres (MIRCENs), supported by UNEP, increased in number by two from six to eight and extended its research and training activities, with special emphasis on the fields of biological pest and vector control. The MIRCENs network continued to promote the environmentally sound application of biotechnologies in developing countries, using the MIRCEN's culture collections. These culture collections were further developed and their stocks appreciably increased in 1991. The MIRCENs are supported by and collaborate with the World Data Centre on Micro-organisms (WDC), located in Japan, which is a freely accessible global register of information on strains of micro-organisms and by the International Microbial Strain Data Network (MSDN), located in the United Kingdom. MSDN acts as a computerized

referral system for information on strains of micro-organisms and cell lines. Both WDC and MSDN stepped up their activities in disseminating information on available microbiological strains.

93. MIRCENs network training activities in 1991 included a workshop and training course in Brazil on "Biodegradation and biodeterioration" (29 July to 9 August 1991), Porto Alegre MIRCEN, and an international course entitled "Engineering of biological reactions and processes", held at the Guatemala MIRCEN, Guatemala City, (13 to 24 May 1991). At the Bangkok MIRCEN a number of candidates were trained in culture collection, microbial insecticides and microbiological techniques. In cooperation with UNEPCOM, another international course entitled "Training in the use of microbial technologies for the removal of mineral pollutants from industrial waste waters" was held in USSR (16 to 27 September 1991, Moscow and Alma Ata).

94. The Bangkok MIRCEN organized a seminar on "Microbiological control of mosquitoes" (24 April, Bangkok), which was attended by scientists from the region. With support from UNEP and in collaboration with WRI, the African Centre for Technology Studies (ACTS) hosted an international workshop on "Property rights, genetic resources and biotechnology" in Kenya (10 to 14 June 1991, Nairobi).

95. The fifth meeting of the Informal UNIDO/UNEP/WHO/FAO Working Group on Biotechnology Safety was held in 1991 to review progress of its work and to plan future activities. The Group recommended, among other things: the promotion of an international code of conduct; the establishment of an advisory group under the auspices of the United Nations to assist countries, upon request, in the assessment of releases of genetically engineered and exotic organisms into the environment; the preparation of a biosafety manual; the development of biosafety training programmes; and the establishment of an international database for information on the release of genetically engineered organisms. Accordingly, UNEP as a lead agency organized a workshop on "Needs and specifications of an international information resource for the release of organisms into the environment", which was held simultaneously in Vienna and Rockville (United States) from 11 to 15 March 1991. As a follow up, the proceedings of this workshop were issued by UNEP in June 1991 and discussed at the second International Conference on the Release of Genetically Engineered Micro-organisms.

96. In 1991, in cooperation with UNIDO's International Centre for Genetic Engineering and Biotechnology (ICGEB), a joint programme on biotechnology safety was launched, in line with the recommendations of the Informal UNIDO/UNEP/WHO/FAO Working Group on Biotechnology Safety. In cooperation with ICGEB, a first training course on "Genetically modified organisms: safety in the laboratory and the environment" was convened in Trieste from 1 to 3 July 1991, and a training course on "Marine microbiology and biochemistry" was convened in the same city from 16 to 20 December 1991.

AGRICULTURAL LANDS AND AGROCHEMICALS *(Budget line 6104)*

97. Over the years, the control of plant pests and vectors of human and livestock diseases

has been based on the extensive use of chemical pesticides, although the application of biological control of agricultural pests has been adopted in a number of regions. Pesticide use has dramatically reduced human morbidity and mortality from vector-borne diseases and has also acted as a major factor in boosting field-based agricultural output (see Table 4) and preventing post-harvest food losses in many parts of the world.

Table 4.

Pesticide use and yields of major crops in selected regions

Country or area	Pesticide use (kg/ha)	Crop yield (tonne/ha)
Japan	10.8	5.5
Europe	1.9	3.4
United States of America	1.5	2.6
Latin America	0.22	2.0
Oceania	0.20	1.6
Africa	0.13	1.2

* Source: Edwards (1986).

98. The use of pesticides, however, has exacted a price in terms of side effects, some of them involving human health, particularly through the food chain. Only a small percentage (often less than 0.1 per cent) of the pesticide actually reaches the targeted pests, with the rest entering ecosystems to pollute land, water and air. Pesticide residues are often a common cause of poisoning, both at home and in the field. According to some estimates, unintentional pesticide poisonings in the world are of the order of one million cases and cause 20,000 deaths per year (see Table 5). The situation is worsening in certain areas, as pest resistance continues to increase, necessitating greater doses of pesticides. For some countries, consumption of pesticides is expected to grow at an annual rate of 7 to 9 per cent towards the year 2000, as compared to an increase of only 4 to 5 per cent annually ten years ago.

99. Pesticides are, of course, not the only method of pest control. A number of different approaches have been tested and appear to give good results. Environmental manipulation, the use of the "sterile male" technique and the introduction of pest-resistant seed varieties all constitute integrated pest management. The FAO/UNEP Panel of Experts on Integrated Pest Control defines integrated pest management as "a pest management system that, in the context of the associated environment and the population dynamics of the pest species, utilizes all suitable techniques and methods in as compatible a manner as possible and maintains the pest populations at levels below those causing economic injury". The importance of promoting integrated pest and vector management in all countries has rightly been stressed during the preparatory process of UNCED.

100. During 1991, UNEP continued to work with ILO and WHO in the International Programme on Chemical Safety (IPCS). IPCS published a number of environmental health criteria documents on pesticides and other matters during the year. UNEP also continued to play a role in the follow-up to the second FAO/UNEP joint meeting on Prior Informed Consent (PIC) that had taken place in Geneva from 1 to 5 October 1990. As part of this follow-up, Decision Guidance Documents

were prepared by FAO and UNEP covering 16 chemicals.

themselves in the promotion and implementation of the principles and practices

Table 5.

Episodes of mass poisoning following the consumption of food contaminated with pesticides

Pesticide involved	Contaminated food	Source or type of contamination	Number of cases	Number of deaths	Location and year
Alkylmercury	bread	treated seed grain	200	70	Iraq, 1956
Alkylmercury	bread	treated seed grain	45	20	Guatemala, 1965-1966
Alkylmercury	seed maize		144	20	Ghana, 1967
Ethylmercury	?	treated seed grain	321	35	Iraq, 1961
Methylmercury	flour	treated seed grain	6 530	459	Iraq, 1971
Hexachlorobenzene	?	treated seed grain	3 000	400	Turkey, 1960-1963
Endrin	flour	spillage during transport or storage	159	0	United Kingdom, 1956
Endrin	flour	spillage during transport or storage	691	24	Qatar, 1967-1970
Endrin	flour	spillage during transport or storage	183	2	Saudi Arabia, 1967
Parathion	wheat?	spillage during transport or storage	360	102	India, 1958
Parathion	flour	spillage during transport or storage	200	8	Egypt, 1958
Parathion	flour	spillage during transport or storage	600	88	Colombia, 1967-1968
Parathion	flour and sugar?	spillage during transport or storage	559	16	Mexico, 1968
Aldicarb	watermelon	not identified	1 350	80	USA, 1985
Total			14 342	1 324	

Sources: Hayes, 1975; Knapp, 1982; Silano, 1985; Green *et al.*, 1987.

101. In 1991, a consultant reviewed the work of the FAO/UNEP Panel of Experts on Integrated Pest Control and recommended expanding the role of, and participation in, the Panel to make it a greater international forum for issues of integrated pest management on a global basis, as well as expanding the training programmes to include government administrators, farm advisors and farmers of integrated pest management.

102. Training courses supported by UNEP in 1991 included: in cooperation with the Centre for International Projects (CIP), Moscow, a second training course on biological control of agricultural pests, for 13 participants from North Africa held in Kishinev and Tashkent (USSR) from 12 to 30 September 1991; and,

in cooperation with FAO, a second, three-week training course on effective use and correct handling of pesticides for 25 scientists from the English-speaking Caribbean countries, held in Kingston, (Jamaica) in August 1991. Further, the 150 women groups' leaders, trained in 1988 on safe handling and use of pesticides under a joint project between UNEP and Thailand, had by the end of 1991 trained some 25,000 other women, with 5,000 trained in 1991 alone.

103. In 1991, UNEP embarked on new programmes of cooperation with the Nairobi-based International Centre of Insect Physiology and Ecology (ICIPE), including locust and tsetse fly control. During the period under review, a number of project proposals were formulated including proposals on: development of technology for the management of the tsetse fly in forest ecosystems; development of a biocontrol strategy for the management of the desert locust (*Schistocerca gregaria*); and a joint UNEP/ICIPE publication on integrated pest and vector management: *Beyond Silent Spring*. A joint fact-finding mission between ICIPE, UNEP and the Government of Rwanda on the situation concerning tsetse flies in the country's forest ecosystems was undertaken in October 1991 and the recommendations of the mission will be pursued in the coming biennium.

OCEANS AND COASTAL AREAS (*Budget line 5101*)

104. The Oceans and Coastal Areas Programme Activity Centre of UNEP in 1991 continued to strengthen its Regional Seas Programme, the globally oriented activities in which it is involved, and its response capability. During 1991, two specific issues heavily taxed UNEP's capacity to deal with an already crowded agenda: UNEP's contribution to the UNCED process, and the coordination of the United Nations inter-agency effort towards rehabilitation of the environment in the aftermath of the conflict over Kuwait.

105. One of UNEP's major achievements in 1991 was the immediate response to the environmental crisis caused by the armed conflict in the ROPME area. The Executive Director initiated a concerted UN inter-agency Plan of Action to address the consequences of the conflict on the marine, coastal, atmospheric and terrestrial environments, and the subject of hazardous wastes in the region. Simultaneously, a Special Trust Fund was established to finance activities under the Plan. Among the activities was the fielding of a Core Group in Kuwait to facilitate the work of the UN inter-agency experts. The implementation of the first phase of the Plan of Action was accomplished during April-July 1991 through a coordinated survey and assessment effort and the establishment of a computerized data system. That effort involved the cooperation of 50 experts and consultants from a dozen UN and other international organizations, in addition to experts from some 20 national institutions from within and outside the region.

106. On completion of the first phase of the Plan, a report was prepared by UNEP on the basis of inputs from all cooperating agencies. The report, which contained, *inter alia*, a proposal for mitigation of adverse effects, rehabilitation and protection of the environment and a set of recommendations, was unanimously adopted for implementation by the Council of ROPME at its extraordinary session in Kuwait on 16 and 17 October 1991.

A consolidated rehabilitation programme for the region was formulated with the assistance of UNEP and UNDP, and was presented by UNEP to a UNDP-convened Funding Strategy Meeting on 16 December 1991, attended by some 70 government delegates, as well as representatives from United Nations organizations and agencies.

107. In accordance with Governing Council decision 16/26 A, pertaining to the development of a strategy document on marine pollution from land-based sources, (see Table 6) UNEP managed to produce such a document despite the extreme constraints of time. Earlier UNEP had participated in the organization of the Intergovernmental Meeting on Land-based Sources of Marine Pollution, held in Halifax (Canada) from 6 to 10 May 1991 and some material from the meeting was used in the preparation of the strategy document. The draft was submitted to an intergovernmental meeting of designated experts, held in Nairobi in December 1991, which reviewed, analysed and amended it. In accordance with Governing Council decision 16/26 B on the preparation of a strategy document for the development and protection of the oceans and coastal areas, a draft strategy was drawn up by a UNEP consultant. UNEP met with IOC in Paris on 19 to 20 December 1991 to discuss and amend the draft strategy which was then forwarded to UNCED by IOC. Through the UNCED working group on oceans and seas, UNEP and other agencies, contributed to the preparation of the Agenda 21 chapter dealing with oceans and coastal areas by preparing a background paper on mechanisms for capacity building, living marine resources and coastal zone management as well as documentation on land-based sources of marine pollution, as requested by the UNCED Preparatory Committee. A UNEP staff member was seconded to the UNCED secretariat to assist in finalizing the documentation on oceans.

108. During the year under review, UNEP continued to support the Regional Seas Programmes in the Mediterranean, Caribbean, and South Pacific and sought to strengthen the programme for the Red Sea, East Asian Seas and South Asian Seas regions. Contacts were initiated to develop programmes for the Black Sea, the North-west Pacific and the South-west Atlantic regions. Plans were being developed to extend northward the area designated as the South-east Pacific region. In addition, UNEP received requests to include several inland seas such as the Aral Sea and the Caspian Sea in the Programme.

109. In 1991, UNEP continued its efforts to bring together all participating States in the Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African region in order to have the Convention come into force. Ratification by two additional States in 1991 brought the total number to four. Active consideration is being given to the establishment of a Regional Coordinating Unit for the Action Plan, which would significantly strengthen this regional programme. The year under review also saw the launching of the preparatory phase of the project on protection, management and development of the marine and coastal areas of the Eastern African region.

110. Under the West and Central African region programme in 1991 an assessment of critical habitats for the whole region was completed. Agreement was reached that $6 million would be provided from GEF for a project in which UNEP is to collaborate with UNIDO to identify and control the

impacts of increasing industrial pollution of the environment in the region.

that a Regional Coordinating Unit should be set up.

Table 6

How the seas are contaminated

[a] Source: Edwards (1986).

111. During the year under review, a special effort was made to enhance the efficacy of UNEP's role in the East Asian Seas region. High-level discussions with the States participating in the Coordinating Body of the Seas of East Asia (COBSEA) resulted in a report on how to revitalize and provide a strategy for further development activities. The report was presented to the ninth meeting of COBSEA from 13 to 15 November 1991. At that meeting it was agreed in principle

112. During 1991, UNEP continued to emphasize the need for the legal components of regional action plans to provide legal bases for obligatory contributions from member States to trust funds and for promoting and harmonizing national environmental legislation. Priorities were given to the issues of liability and compensation, and to broadening the scope of existing conventions and protocols to include, where applicable, internal related waters. An effort is being

made to strengthen the interrelation between regional seas conventions and protocols and other agreements adopted at the regional and global level.

113. Special emphasis was placed by UNEP's OCA/PAC on vital programmes such as those for the protection of marine mammals, climate change and sea-level rise, environmental impact assessment case studies, with recommendations on applicability, limitations and approaches, and integrated coastal zone management. Activities under the Marine Mammals Programme culminated in a workshop on marine mammal conservation, held at UNEP headquarters in Nairobi (7-16 October 1991) to train experts from East Africa in the protection of marine mammals. A total of 20 participants from Kenya, Madagascar, Mauritius, Mozambique, Reunion and the United Republic of Tanzania attended the workshop. Further, UNEP prepared the first draft of an action plan for the protection of marine mammals in the South-East Pacific region during 1991.

114. The Scientific Advisory Committee to the Marine Mammal Action Plan on Marine Mammals and Contaminants met in Palma de Mallorca (Spain) from 6 to 8 November 1991, bringing together toxicologists, pathologists, virologists and marine mammalogists from a number of countries. The participants decided, *inter alia*, to create an emergency response fund to send a team of four specialists any place in the world where a massive die-off of marine mammals might occur.

115. Within the framework of UNEP's climate change activities, the number of Regional Task Teams on the Implications of Climate Change increased to nine in 1991. The task of these teams is to assess the potential impacts of climate change and assist Governments in the identification and implementation of suitable response measures. A further two regional task teams are in the process of being established, while negotiations are progressing for the establishment of two global task teams on the implications of climate change and sea-level rise, specifically for coral reefs and mangroves. Proposals for site-specific case studies, prepared by the task teams in 1991 on the basis of IPCC guidelines for vulnerability assessment, were submitted to UNEP for financial support. Six of the proposals were selected for implementation in 1991-1992. A joint UNEP/WMO/IOC "Long-Term Monitoring System for Coastal and Near-shore Phenomena Related to Climate Change" was adopted. Under the system, the operational details of six pilot activities are presently being finalized.

116. In 1991, UNEP further developed the general application of integrated coastal zone management, as it is the most effective approach to address the numerous multidisciplinary issues confronting the world's densely populated coastal areas, as well as the near-shore marine environment. By helping Governments to prepare policy options, UNEP continued to contribute to the handling of the problems of eventual sea-level rise and land-based anthropogenic sources of marine pollution.

117. Throughout in 1991, OCA/PAC acted as the UNEP focal point for the protection of international waters programme component of GEF. Advice and comments were sought and given on some twenty project proposals related to coastal areas and the marine environment, involving tens of millions of dollars. UNEP was also directly involved in

the development of the GEF project proposals for the Black Sea (approximately $10 million) and the Red Sea (approximately $10 million). Specialists identified by UNEP are already participating in field missions and programme officers are involved in project design.

118. During the year under review over 30 publications were printed or prepared, as well as three regional seas conventions and protocols. The directory of organizations and organizational units that assist in or contribute to the coordination of the action plans related to the Regional Seas Programme was revised and updated. The *Island Directory* was finalized, as well as the *World Directory of Coral Reef Researchers*. Revision of the UNEP/FAO Directory of Mediterranean Marine Research Centres is in preparation. In addition, some 46 other publications were printed in the series of UNEP Reference Methods for Marine Pollution Studies and in the UNEP Regional Seas Reports and Studies series. The *State of the Marine Environment*, prepared by the Joint Group of Experts on the Scientific Aspects of Marine Pollution (GESAMP), was published in hardback form.

LITHOSPHERE
(Budget line 6107)

119. Through its work on the lithosphere, UNEP is trying to increase the understanding of the interconnection between biosphere and geosphere, and of the effects of human activities on them. The work involves a synthesis of knowledge gathered in different scientific disciplines, the holding of workshops and the publishing and dissemination of workshop proceedings in order to provide decision makers and planners with scientifically sound data. UNEP's activities, conducted mainly in cooperation with SCOPE, contribute significantly to international research programmes such as the International Geosphere-Biosphere Programme.

120. Under the ongoing UNEP/UNESCO/UNEPCOM project on the effects of human activities on the outer crust of the earth, Volume II (*Mining and the Geoenvironment*) of the 3-volume manual *Geology and Environment* was published and distributed in 1991. Other publications that appeared during the year under review were: (a) *Biogeochemistry of Major World Rivers*, under the SCOPE/UNEP project on carbon cycling, containing a wealth of chemical and physical data about rivers all over the world; (b) *Stable Isotopes: Natural and Anthropogenic Sulphur in the Environment*, describing the use of tracer techniques and measurements of isotopes to identify human-induced sulphur emissions; and (c) *Phosphorus Cycles in Terrestrial and Aquatic Ecosystems - Regional Workshop 3: South and Central America* based on the proceedings of a 1989 workshop organized by the Universidad Central de Venezuela under the SCOPE/UNEP project on phosphorus cycles, and covering the different ecosystems within the Amazon watershed.

121. In March 1991 a workshop on African ecosystems was held at UNEP headquarters attended by 33 soil scientists, hydrologists and agronomists from all parts of Africa and from international research institutions. At the meeting, knowledge gaps and priority areas for future research were identified and the content of the forthcoming publication on phosphorus in African ecosystems was outlined. This meeting concluded the series of regional workshops which had commenced

in 1988, organized under the "Phosphorus Cycles" project.

122. Under the project "Biogeochemistry of small catchments", implemented in cooperation with the Geological Survey of Czechoslovakia, an editorial meeting was held in May 1991 to prepare the publication of papers presented during a SCOPE/UNEP workshop that had been organized in Czechoslovakia in 1990 (see 1990 *Annual Report* Chapter III, para. 128). The publication is expected to become available in 1992.

123. The "Particle flux in the ocean" project, implemented by SCOPE and the University of Hamburg (Germany) continued to contribute to the Joint Global Ocean Flux Study of the International Geosphere-Biosphere Programme. The major task of the project is to assess the ocean's capacity to absorb additional CO2, emitted as a result of industrial activities, deforestation, etc. Under the project, in April 1991 a workshop was held in Goa (India) dealing with carbon fixation and sedimentation of organic matter in the north Indian Ocean, the South China Sea, the Philippine and Caroline Basins, and the Japan Sea. At the workshop, the 47 participants from developing and developed countries exchanged experiences on methodologies and reviewed available knowledge on the biogeochemistry of the ocean waters in the region.

HUMAN SETTLEMENTS AND THE ENVIRONMENT (*Budget line 7104*)

124. By the Year 2000, half the people in the world will live in urban areas. Large cities with populations in excess of 10 million will be a common feature of urbanization, especially in the developing regions. Because cities generate large portions of a country's wealth in terms of goods and services, directing their development in an environmentally sound manner is in itself a contribution to environmentally sound development in general. However, the techniques for planning and managing large cities are still being tested and there remains a great deal of uncertainty as to the best course of action to follow. Increasingly, a clear perception is emerging that sound management of cities can reverse the deterioration evident in the world's major metropolises and their hinterlands. This perception has been encouraged by the joint actions of UNEP and the United Nations Centre for Human Settlements (Habitat) to improve the environment of cities.

125. During the year under review, UNEP helped to produce several publications. *Climate and human settlements: Integrating climate into urban planning and building design in Africa* provides guidance on incorporating climate factors into the planning, design and construction of cities to enhance human comfort, maintain proper urban air quality, and encourage appropriate consumption of energy and rational use of resources. *Indoor environment: Health aspects of air quality, thermal environment, light and noise* focuses on four important factors of indoor environments. *Surface water drainage for low-income communities* explains how such communities can construct a simple, effective, low-cost drainage system or rehabilitate an existing system.

126. In 1991 UNEP, in cooperation with WHO, produced a kit addressing the urban vector problem, entitled "Insect and rodent control through environmental management: a community action programme". The kit

consists of a manual and information and action sheets covering each of eight insect and rodent pests and vectors of disease.

127. UNEP and the Government of Yemen in 1991 finalized a project to improve the environmental health of slum dwellers. This pilot project will be implemented by the Environmental Protection Council of the Government of Yemen, in collaboration with the Regional Office of WHO.

Natural disasters

128. Concern over industrial accidents and their transboundary effects, over the high losses triggered by natural disasters, and over the severity of both global and localized environmental deterioration has generated widespread consensus on the need to strengthen the international response to environmental disasters. This concern was reflected in Governing Council decision 15/10 of May 1989, calling for consideration of the establishment of a United Nations Centre for Urgent Environmental Assistance. In accordance with that decision, the Executive Director invited Governments, UN agencies and other relevant organizations to offer their views and suggestions on the centre. An analysis of the responses received from 37 countries and 20 agencies showed strong support, in principle, for the establishment of a centre, with nearly all agreeing on the need to improve the UN's capacity to respond efficiently and appropriately to environmental emergencies.

129. Based on the strong support for the centre and on the need for a further examination of certain critical questions, throughout 1990 and into 1991, a study was prepared on the implementation of Governing Council decision 15/10. The results of the study were reported to the Governing Council at its sixteenth session (see UNEP/GC.16/4/Add.2, section III). The Council in its decision 16/9 requested the Executive Director to proceed with the development of the centre, acting in cooperation with the UN agencies, on an experimental basis, at the beginning of 1992 for a period of eighteen months and to report to the Council at its seventeenth regular session. Accordingly, a project containing the details of the experimental phase of the centre was approved in 1991 and will begin with the preparation of a master plan for the establishment of the centre, a databank on environmental emergencies and a roster of specialized experts and appropriate equipment. Under the project, three case studies will be prepared on environmental emergencies, to examine the efficiency of the UN system's response to environmental emergencies.

HUMAN HEALTH AND WELFARE

ENVIRONMENTAL ASPECTS OF COMMUNICABLE DISEASES *(Budget line 7101)*

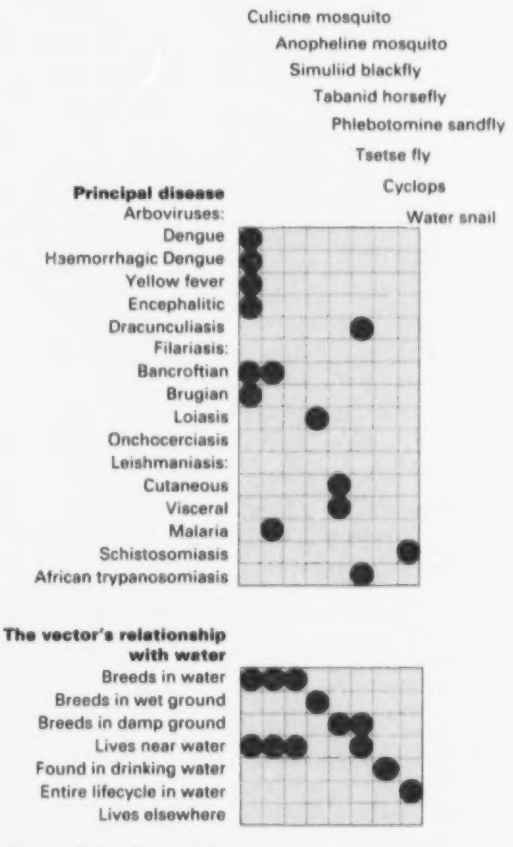
130. The achievement of sustainable development, the promotion of health and the rational management and use of environmental resources are all interlinked and inseparable. Tragic examples exist in all parts of the world to illustrate how abuse of the environment affects health and development, how people become ill from environmental causes, and how development, which is so dependent on the availability and quality of environmental resources, fails. Many diseases are water-related, including malaria, schistosomiasis (bilharzia), lymphatic filariasis (elephantiasis) and

onchocerciasis (river blindness). Disease vectors either breed in water or wet or damp ground, live near water, are found in drinking water or spend their entire life in water (see Table 7). To destroy vectors, early intervention is necessary. However, if pesticides are the sole means of pest or vector control, particularly in water-development projects such as large- or small-scale irrigation schemes, they contaminate the food chain; also, the vectors develop resistance, which exacerbates the situation.

131. During 1991, the FAO/UNCHS/UNEP/WHO Panel of Experts on Environmental Management for Vector Control (PEEM) continued its work. On 1 January 1991, UNCHS (Habitat) became the fourth organization participating in PEEM. In order to accommodate UNCHS, as well as to provide for PEEM's increased orientation towards field work, the original "Arrangements" between the participating organizations, signed in 1980 by the executive heads of the organizations, were reviewed. In the new "Arrangements", six areas requiring greater attention were identified: (a) vector-borne disease problems associated with rice agro-ecosystems; (b) water-borne and water-related vector-borne diseases, in relation to irrigation scheme management; (c) vector-borne diseases and other health hazards related to the use of waste-water in agriculture; (d) livestock management in relation to vector-borne diseases; (e) problems of vector-borne diseases associated with urbanization; and (f) vector-borne disease surveillance.

132. The WHO Expert Committee on Insecticide Resistance met in Geneva from 5 to 12 March 1991 to update the status of vector resistance to pesticides; to evaluate new, tentative methodologies for detecting resistance; and to discuss the essential components of resistance management in the context of vector-borne disease control

Table 7.
Association between vector, disease and water



Source: Birley, M.H. (1989).

programmes. The Committee stressed that the sustainability of control programmes depended upon the tool(s) to be used and the risk of resistance inherent in each of them and made a number of recommendations, some pointing to a specific potential role for UNEP, on training and information dissemination, research and development and resistance detection and management.

133. Food contamination poses a serious threat to human and livestock health, food security and sustainable development. Apart from causing outright losses, contamination by moulds can become a major health hazard, especially in warm, humid countries where food storage facilities are often inadequate and drying techniques are unavailable. Human ailments and reduced animal yields and performance are the result. To finalize discussions on the establishment of a training network for mycotoxin control in Asia, a meeting was held in Moscow from 15 to 17 April for representatives of CIP, FAO, UNEP, the Indian National Institute of Nutrition, the National Post-harvest Institute for Research and Extension (Philippines) and the Division of Plant Pathology and Microbiology, Department of Agriculture (Thailand). The meeting set out the contents of each proposed training course, the criteria for selection of trainees, the equipment needs and the terms of reference for the various categories of consultants and coordinators needed. The Moscow Institute of Nutrition will also be part of the training network to provide specialized fellowship training on the control of mycotoxins other than aflatoxins.

134. In association with FAO and UNEPCOM, in 1991 UNEP assisted the Government of the United Republic of Tanzania to set up facilities for mycotoxin surveillance and monitoring at the Government Chemical Laboratory, where 40 staff were trained in sample collection for analysis. Over 1,500 samples of various agricultural products were analysed. A manual for analysis, a technical report on strategies and recommendations for mycotoxin control in the country, and a farmers' information booklet on mycotoxin control were published in English and Kiswahili and distributed in the United Republic of Tanzania and other countries in Africa.

135. The third World Conference on Action for Public Health (The Sundsvall Conference on Supportive Environments) was held in Sundsvall (Sweden) from 9 to 15 June 1991, attended by 318 participants from 81 countries. In preparation for the Conference, the organizers - the Nordic Council and WHO, in conjunction with UNEP - had prepared and distributed briefing books on food and agriculture, transport and energy, social support and care, education, work, health promotion and action in developing countries. "The Sundsvall Statement" adopted by the Conference calls upon people world-wide to engage actively in making the environment more conducive to proper health by addressing health and environment concerns concurrently.

136. In cooperation with the WHO Regional Office for the Eastern Mediterranean at Alexandria (Egypt), in 1991 UNEP conducted training courses on water supply, sanitation and health for environmental health officers working with the Palestinian people. So far, 36 of the 122 environmental health officers have been trained. A manual on water supply and sanitation was prepared, field tested and published in English and Arabic in 1991. The

impact of the training activities is being evaluated through site visits and interviews with both trainees and supervisors.

137. The First Interregional Workshop on the Promotion of Environmental Management for Vector Control was held at Alexandria from 23 to 26 September 1991 for participants from Egypt, Ethiopia, Kenya, Morocco, Pakistan, Sudan, Syrian Arab Republic, United Republic of Tanzania and Zimbabwe. Each country was represented by two scientists, one from the medical field and the other from agriculture, emphasizing the intersectoral linkages in pest and vector control. The workshop was supported by the United States Agency for International Development (USAID) and the International Development Research Centre (IDRC). A second, similar workshop, also supported by USAID and IDRC, was held in Bangkok from 28 to 31 October 1991 for participants from China, India, Indonesia, Malaysia, Nepal, Philippines, Sri Lanka and Thailand.

HAZARDS OF POLLUTION
(*Budget line 7103*)

138. To provide a concerted UN effort to assess the risks to human health and the environment, as well as to strengthen national capabilities for the control of potentially toxic chemicals, UNEP in 1991 continued to cooperate actively with ILO and WHO within the framework of IPCS. Four additional States became active members of the Programme in 1991, bringing to 32 the number of States and institutions that have signed Memoranda of Understanding on collaboration with IPCS. In addition, the network of institutions participating in the work of IPCS now comprises 70 national scientific institutions which carry out specific IPCS activities. In accordance with Governing Council decision 16/35, section II, on developing proposals concerning possible intergovernmental mechanisms for chemical risk assessment and management, the Executive Director convened a meeting in London from 16 to 19 December 1991. IPCS played a lead role in the meeting, which identified programme areas that were considered vital for the environmentally sound management of chemicals.

139. In the environmental health criteria series of documents, published by IPCS, which evaluate the risk a chemical presents to health and the environment, evaluations of a further 13 priority chemicals were issued during 1991. In addition, IPCS published 11 Health and Safety Guides, providing practical advice for decision makers. A further 360 International Chemical Safety Cards were prepared, summarizing essential product identity data and health and safety information on chemicals for use at the "shop-floor" level. An update of the computerized listing (prepared jointly with IRPTC) of 310 chemicals being tested for toxicological effects and of 465 chemicals under review was disseminated in 1991 and a further update is under preparation.

140. At two meetings of the FAO/WHO Joint Expert Committee on Food Additives and Veterinary Drugs, IPCS, with FAO, evaluated the toxicological risks of 23 food additives, two food contaminants and 10 veterinary drugs. Eighteen pesticides widely used in agriculture were toxicologically evaluated by IPCS for the 1991 Joint FAO/WHO Meeting on Pesticide Residues. In collaboration with FAO, IPCS in 1991 issued a number of Data Sheets on pesticides in both

English and French, giving priority to compounds that are widely used in public health programmes and/or agriculture and to compounds classified as highly hazardous.

141. Monographs published by IPCS in 1991 covered the principles for the toxicological assessment of pesticide residues in food and the evaluation of short-term tests for carcinogens; nephrotoxicity associated with exposure to chemicals; safe use and disposal of chemicals in laboratories; methods for assessing exposure of human and non-human biota to chemicals; early indicators of effects of pesticides on non-target organisms; and the proceedings of international workshops on immunotoxicity of metals and immunotoxicology, on Kashin-Beck disease and non-communicable diseases, on health significance and early detection of nephrotoxicity, on methods for assessing and reducing injury from chemical accidents, on ecotoxicology and climate, and on short-term assays for studies of complex mixtures.

142. IPCS prepared in 1991 guidelines on poison control, including how to set up and operate poison control facilities. A manual was published on simple analytical toxicological techniques for use in hospital laboratories without sophisticated equipment, together with a handbook, for use by primary health-care workers, on prevention and first-aid treatment of poisoning. An English-French- and Spanish-language computerized poison information package (INTOX) was finalized by IPCS in 1991. The package contains information on diagnosis and treatment of poisoning from about 60 toxic substances and provides basic materials for the establishment of poison information centres throughout the world. Several monographs were prepared by IPCS in 1991 to evaluate the clinical and field use of antidotes to treat poisoning, including pesticide poisoning.

143. In 1991, IPCS organized 10 training courses on various aspects of chemical safety for developing countries, with over 300 participants. The principal topics covered were: chemical safety and risk assessment (5 courses); safe use of pesticides (2 courses); and poison treatment and prevention (3 courses). Modular training materials were developed on the toxicological and ecotoxicological nature of chemical hazards, basic chemical risk and hazard assessment and safe use of pesticides.

144. The joint study carried out by UNEP and the International Commission for Protection Against Environmental Mutagens and Carcinogens (ICPEMC) on comparative risk assessment in connection with exposure of human and non-human biota to genotoxic agents and ionizing radiation reached the final stages of review in 1991. A summary version of the report for non-specialists and decision makers is being prepared for distribution in 1992.

145. During the year under review, UNEP continued to participate actively in the European Centre for Pollution Research (ECPR), a multinational organization of European universities and research institutes dedicated to study of and research into aspects of environmental pollution. UNEP, ECPR, UNESCO and the Directorate General for the Quality of the Environment of the Government of Portugal co-sponsored an International Conference on Environmental Pollution (ICEP-1) in Lisbon from 15 to 19 April 1991. The Conference provided a forum for the presentation and discussion of the state of the art

of all scientific and policy making aspects of environmental pollution.

ENERGY, INDUSTRY AND TRANSPORTATION

ENERGY AND ENVIRONMENT (*Budget line 2103*)

146. Existing patterns of energy production and supply have little concern for sustainability, resource depletion or environmental impact. In recent years, however, a consensus has emerged in the scientific community that the environmental damage caused by current energy production patterns, and in particular the threat of climate change due to the increased greenhouse effect, is one of the most serious problems facing the world today. The energy sector is responsible for roughly 50 per cent of current greenhouse gases emissions, primarily the emission of CO2 from the burning of fossil fuels, and contributes to other serious environmental problems.

147. In the field of energy, UNEP in 1991 continued to focus on promoting the incorporation of environmental concerns into policy and planning world-wide, with special emphasis on the greenhouse gases. UNEP works through the development of practical planning tools and pilot projects, where the validity of different methodological concepts and practical approaches is tested and evaluated. In addition, UNEP helps to generate and disseminate general information on the environmental impacts of different energy sources.

148. A major event in 1991 was the official opening on 11 February of the UNEP Collaborating Centre on Energy and Environment at RISO National Laboratory (Denmark). The Centre is provisionally jointly financed for a period of four years by UNEP, the Danish International Development Agency (DANIDA) and the host institution, the RISO National Laboratory. The activities of the Centre are governed by a Management and Policy Committee with representatives from the funding organizations and an observer from the Danish Environment Research Institute. The Centre is initially staffed by an international team of four energy scientists and economists. Its general objective is to promote and facilitate environmentally conscious energy planning throughout the world, especially in developing countries, through four main areas of activity:

(i) Assessment of environmental impacts of energy production and use in developing countries, data collection and studies of greenhouse gases emissions, and collection of information on efficient energy production and end-use technologies, on potential for energy conservation and on the environmental impacts of specific energy technologies;

(ii) Preparation of energy policy studies for selected countries and formulation of guidelines for incorporating environmental considerations into energy policy;

(iii) Provision of an information centre on energy-related environmental effects, energy planning methods and models, establishment and maintenance of databases, dissemination of information to UNEP and other UN agencies, Governments and other interested parties;

(iv) Provision of scientific and technical support to UNEP headquarters. The estab-

lishment of the Centre was publicized in a brochure entitled "UNEP Collaborating Centre on Energy and Environment", and the first issue of the Centre Newsletter "C2E2" was published in June 1991.

149. The work on the Environmental Database (EDB), developed for UNEP by the Stockholm Environment Institute - Boston Center, continued in 1991 and the responsibility for its further development is now shared between the Stockholm Institute and the new UNEP Collaborating Centre. The purpose of the EDB is twofold: in conjunction with an energy planning model in national energy planning, it can be used to calculate the environmental loadings of any type of energy development scenario, and it can also be used as a stand-alone reference tool to provide appropriate data on the environmental impact (e.g. emissions) of particular energy activities. The aim is to make EDB available to institutions and researchers, mainly in developing countries. In 1991, the EDB was being applied in Costa Rica and Senegal, supported by the Stockholm Environment Institute - Boston Center, and in Ecuador, with the support of the UNEP Collaborating Centre. Developments during 1991 were primarily concerned with extending the scope of the database, entering further data and improving the user interface.

150. UNEP developed a major new project for a national energy-environment policy study for India in 1991, in collaboration with the Indian Government and the implementing organization, the Tata Energy Research Institute. The project is to develop an action plan for more environmentally sound energy development in India, based on detailed policy analysis, a number of case studies and assessments of the technology and external funding requirements. Similar policy studies were under discussion with the Governments of China and Mexico.

151. The Senior Expert Symposium on Electricity and the Environment was held from 13 to 17 May 1991 in Helsinki (Finland), sponsored jointly by a number of international institutions, including UNEP, with IAEA as lead agency. Alongside participation in the joint steering committee, UNEP contributed directly to one of the expert groups established to write an issue paper entitled "Comparative environmental and health effects of different energy systems". The final meeting of the expert group was hosted by UNEP and jointly sponsored by UNEP, WHO and IAEA. One of the central recommendations of the Symposium was inter-agency collaboration to undertake environmental and health studies of energy production and, specifically, to prepare an environmental database.

152. The UNEP Collaborating Centre took part in the organizing committee of the conference entitled: "Global Collaboration on Sustainable Energy Development", held in Denmark in April 1991, which was attended by a wide range of researchers and officials from governmental and non-governmental organizations. A UNEP paper entitled "Policies for sustainable energy development analysis from a UNEP perspective" was presented at the Conference. The UNEP Collaborating Centre also represented UNEP in the work of the United Nations Solar Energy Group for Environment and Development, a high-level group of experts was established in August 1990 by the Director General for Development and International Economic Cooperation of the UN, with a mandate to respond to a request made by the Committee on New and Renewable Sources

of Energy at its fifth session in 1990 to prepare a comprehensive contribution to UNCED.

153. Under the AMCEN Programme, the energy network continued its work and in April 1991 the first Management and Policy Group meeting for the network was convened in Senegal. A pilot project on education and training in wood fuel management was under preparation in Uganda in cooperation with the Bellerive Foundation (see 1990 *Annual Report*, Chap. III, para. 153).

INDUSTRY, TRANSPORTATION AND ENVIRONMENT
(Budget line 2104)

154. In 1991, the Industry and Environment Office (IEO) consolidated its programme according to the priorities laid down by the Governing Council in its decision 15/37: cleaner production; technological accidents - the Awareness and Preparedness for Emergencies at Local Level (APPELL) programme; and training in hazardous waste management. Support activities, such as a query-response service, technical assistance and information exchange among countries and industries, were also maintained. The Governing Council, in its decision 16/25, expressed satisfaction at the important role played by IEO in promoting environmentally sound industrial development and agreed to transform IEO into a Programme Activity Centre with effect from the beginning of 1992.

155. In order to expand the range of industrial sectors covered by the Cleaner Production Programme, two additional working groups were established in 1991 - one in the field of pulp and paper, with support from the Finnish International Development Agency (FINNIDA), and another on biotechnology, with the support of France. During the year under review, the Policies and Strategies Group was established under the Cleaner Production Programme.

156. The International Cleaner Production Information Clearing-house (ICPIC) network for information exchange, established with support from the United States Environment Protection Agency to bring together sources of expertise and those requiring information, was further consolidated in 1991. The database now contains more than 600 case studies on cleaner production technologies. There was also an increase in the number of entries for IEO's directory of international experts, calendar of training events, seminars and meetings and bibliography. Following connection to TELENET, the packet switching network, users in 98 countries were enabled to access ICPIC information for the cost of a telephone call.

157. The recommendations of the senior-level seminar, hosted by the United Kingdom in Canterbury in September 1990 (see 1990 *Annual Report*, Chap. III, para. 160), were presented to the Governing Council at its sixteenth session. In its decision 16/25 (Annex) the Council requested the strengthening of the Cleaner Production Programme, including support for the creation of national and regional focal points. As a follow-up, a workshop to develop an agenda for action was organized in Paris from 17 to 19 September 1991 and was attended by 50 experts, 30 of them from 10 developing countries.

158. In 1991, IEO training activities in the prevention of industrial accidents included a seminar in Turkey in September 1991,

attended by 120 participants; one in Tunisia in October 1991, attended by 70 participants; and one in the USSR from 9 to 13 December 1991, attended by 60 participants. A Directory of Emergency Response Centres was published jointly with OECD. Currently, 84 APELL focal points form a network for the exchange of information and expertise.

159. Within the series of training activities in the management of hazardous waste, under which four workshops are to be held in each region of the world, a workshop on hazardous waste management policy and strategies was held in Mauritius from 3 to 7 June 1991, with 46 participants from 19 countries in English-speaking Africa. A workshop on landfill, using waste, was held in Puerto Rico from 18 to 22 November 1991, and was attended by 35 participants from 21 countries in Latin America and the Caribbean. The preparation of training documentation for these activities was carried out in cooperation with the Environmental Education and Training Unit of UNEP.

160. UNEP continued to provide an information exchange service on cleaner production, management of pollution and wastes, and general industrial environmental information in 1991. The IEO query-response service handled some 2,800 requests for information or documentation on technical and environmental matters during the year under review. More than 25 per cent of the queries concerned a range of technical and scientific subjects, calling for substantial research. Figure 3 shows a breakdown of queries received by IEO in 1991 in terms of regions, inquirers, subjects and sectors.

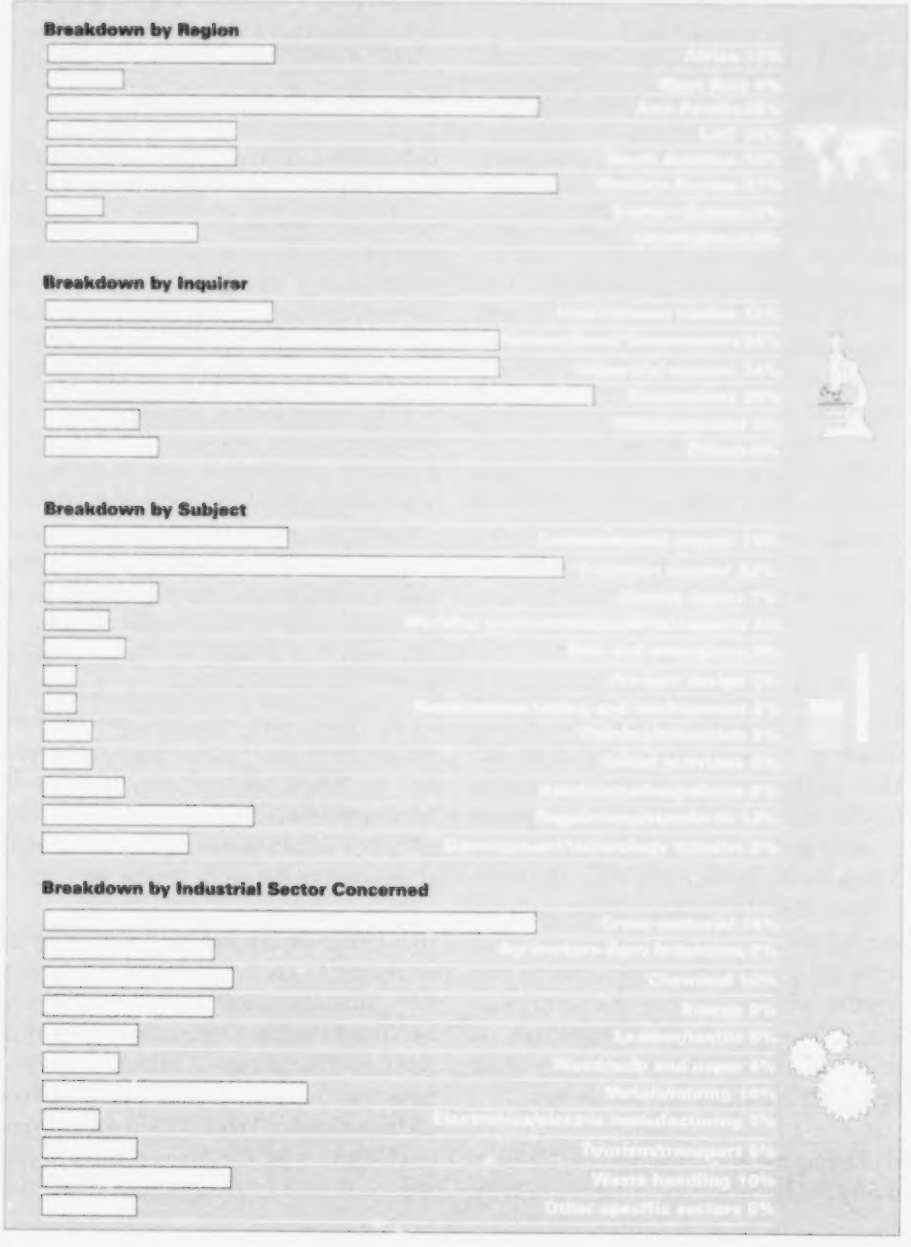
161. During the year under review, UNEP's Industry and Environment Office was heavily involved in the second World Industry Conference on Environmental Management (WICEM II), organized by the International Chamber of Commerce in Rotterdam in April 1991. As a follow up to WICEM (II), technical assistance was provided to the Congo and Togo to help develop policies in the field of industry and environment.

162. In 1991, IEO published two issues of the newsletter *Cleaner Production* in English and French, targeted primarily at industrial managers and decision makers. Four technical reports were produced: number 4, *Tanneries and the Environment*; number 5, *Mining and the Environment*; number 6, *Companies' Organization and Public Communication on Environmental Issues*; and number 7, *Audit and Reduction Manual for Industrial Emissions and Wastes*. Two of the reports (numbers 4 and 7) were produced jointly with UNIDO. A report entitled *Energy Efficiency and Climate Change* was jointly published with the International Petroleum Industry Environmental Conservation Association (IPIECA). To aid the transfer of information, four issues of the review *Industry and Environment* were published: two on water conservation, the third on plant monitoring and the fourth on computerized tools for environmental management. IEO also published its third annual report, giving details of the work of the office during the year.

163. Under the programme approved by the Governing Council at its sixteenth session, in 1991 work was initiated, in cooperation with the World Tourism Organization (WTO), on the preparation of a report on tourism carrying capacities. An International Symposium on the Integration of Tourism Development and Environment in the Huangshuan Scenic Area was held in Huangshuan (China) in

Figure 3

Breakdown of technical queries received by IEO (January to November 1991)



October 1991, in association with WTO and UNESCO.

164. Many of the activities proposed under IEO's programme in 1991 continued to involve active cooperation with UN and other bodies - in particular, UNIDO, ILO, IMO, the Office of the United Nations Disaster Relief Coordinator (UNDRO), IAEA, UNESCO, WTO, the World Bank and OECD. Closer ties were developed with industry associations, such as the International Chamber of Commerce, International Petroleum Industry Environmental Conservation Association, European Council of Chemical Manufacturers Federation, Chemical Manufacturers Association and others, which provided valuable technical information and expertise. Similar technical assistance continued to be provided to IEO by government agencies and the European Community, with direct financial support and in-kind contributions.

165. IEO cooperated with the UNCED Secretariat on a number of issues, and provided assistance in drafting and reviewing issue papers and providing technical information, particularly on waste minimization and management. As an input to the UNCED process, IEO also assisted UNIDO in the organization of the conference on Ecologically Sustainable Industrial Development (Copenhagen, 14 to 18 October 1991).

PEACE, SECURITY AND THE ENVIRONMENT (*Budget line 8101*)

166. During 1991, UNEP completed a report on the effects of chemical weapons on human health and the environment (UNEP/GC.16/6) for submission to the Governing Council at its sixteenth session in May 1991. In the light of the fear early in 1991 that the armed conflict over Kuwait might give rise to the use of chemical weapons, the Executive Director's report on this topic was very timely. The Council, in its decision 16/12, unequivocally condemned chemical warfare and requested the Executive Director to make his report available to the Conference on Disarmament. At the same session, in its decision 16/23, section I, the Governing Council decided, *inter alia*, to delete subprogramme 9 (Peace, security and the environment) and to transfer certain activities under that subprogramme to subprogramme 2 (Water).

167. In June 1991, UNEP organized a seminar in Geneva, in collaboration with the United Nations Institute for Disarmament Research (UNIDIR), entitled "Disarmament, environment and development and their relevance to the least developed countries". As a result of the seminar, a joint UNEP/UNIDIR publication was issued in December 1991, providing an overview of the issues from four distinct perspectives: that of the least developed countries; that of the highly developed countries; that of the intergovernmental agencies (especially the UN); and that of the biosphere in general.

168. In collaboration with the Peace Research Institute of Oslo and the Life and Peace Institute, in June 1991 UNEP organized a training course at Uppsala (Sweden) on the topic "Co-operation on environmental security and conflict resolution in the Horn of Africa". The 30 participants attending the training course were from the countries in the Horn of Africa. IGADD was represented at the course by its Executive Director and a senior staff member. A second training course, on environmental security and conflict

resolution was held in Prato (Italy) from 10 to 19 November 1991 for 27 participants.

ENVIRONMENTAL ASSESSMENT
Scientific and Technical Information

INFOTERRA *(Budget line 3104)*

169. By 1991, INFOTERRA, the International Environmental Information System, established in response to recommendation 101 of the Stockholm Conference to facilitate the exchange of environmental experience and information within and between nations, had grown to a network of 140 partner countries covering 99 per cent of the population of the world. During 1991, Djibouti and Lithuania joined the INFOTERRA network.

170. During the year under review, over 21,500 users from over 95 countries made use of the network's information services, an increase of 11 per cent over figures for the previous year. INFOTERRA's routine user questionnaire data continued to demonstrate the high satisfaction rate among those who had put queries to the network and reflected improved capabilities in decision-making in the field of the environment. The number of reported cases of benefits to INFOTERRA users due to the information received continued to increase, and in many cases considerable savings were said to have been achieved from using the technical information provided by INFOTERRA sources.

171. The year 1991 saw a complete revamping of the INFOTERRA network of sources of information and the INFOTERRA series of databases. A completely revised third edition of the *INFOTERRA Thesaurus of Environmental Terms* was published early in the year. Using that essential tool - widely recognized as the standard UN reference work on environmental descriptive definitions - every source was re-evaluated. The exercise, involving all of the national partners and every UN agency that provides sources, stressed the quality of the potential sources to users, rather than amassing a quantity of sources with the probability of unnecessary duplication. Under this major task, a totally revised database had been created by the end of the year and, based upon this database, hardcopy and electronic *INFOTERRA Directories of Sources of Environmental Information* were published and distributed.

172. Great strides were taken in 1991 in developing regional INFOTERRA activities, most especially in southern Africa, the Caribbean and Portuguese-speaking Africa. The first INFOTERRA companion relationship between the national focal points (NFPs) of the United States and Botswana was expanded to cover other countries in the Southern African Development Coordination Conference (SADCC) subregion. Technical assistance and other resources were provided by means of staff visits, hardware and software, training, etc. and this led to the creation of an INFOTERRA Southern Africa Sub-network (ISAS), bringing together Angola, Botswana, Lesotho, Malawi, Mozambique, Swaziland, the United Republic of Tanzania, Zambia and Zimbabwe, assisted by their companion partners, Ireland and the United States. A regional conference was held at Washington D.C. in June 1991, at the invitation of the United States, for English-speaking Caribbean countries and to exchange experience in managing INFOTERRA affairs. Regional

Service Centres (RSCs) were established for southern Africa and the English-speaking Caribbean countries, bringing the total number of RSCs to 10. Considerable progress was also made in expanding INFOTERRA operations and services in Latin America and in southern Asia, resulting in an improved international exchange of environmental information.

173. INFOTERRA established an electronic mail (e-mail) system in 1991 to improve the efficiency of the exchange of environmental information. As a result of the INFOTERRA initiative, some 40 NFPs and UNEP outposted offices had been linked to UNEP headquarters via the e-mail system by the end of 1991. A significant proportion of INFOTERRA queries are currently being processed via e-mail in addition to telefaxes, telex, courier services and regular mails. In a related move, INFOTERRA provided technical assistance to ROLAC in the start-up of the Information Exchange System for that region (Ambionet). INFOTERRA NFPs have been designated as priority users of Ambionet and will be among the first to be connected to the system.

174. INFOTERRA's considerable multiplier effect was further demonstrated during 1991. Most NFPs in developed countries and some in developing countries have direct access to major environmental databases within their countries and have made this information available to users in remote parts of the world through the networking process. What was hitherto unavailable to users in developing countries is now accessible, normally without charge. As a result of forwarding an enquiry to INFOTERRA, many users have been able to widen their circle of contacts working in similar projects, pool their resources and share more information. Countries also benefited from INFOTERRA assistance in specific situations in 1991, e.g. the provision of technical information to the Philippines following the eruption of Mount Pinatubo, and information for China when unusually high flooding caused serious environmental damage.

175. The INFOTERRA Advisory Committee (IAC) held its fifth meeting in London in May 1991 at the invitation of the United Kingdom, where a series of valuable recommendations were made for the further development of the network and its services. A number of countries held national INFOTERRA seminars (Botswana, Ghana, Togo and Zimbabwe) which brought together sources and potential users of the network for the purpose of awareness-building. Such seminars have proved to be a particularly effective method of introducing the network to decision makers. In addition, some NFPs hold "open houses" for their potential client communities where INFOTERRA materials are displayed and the services provided are explained. Among the countries that conducted such exercises in 1991 were Ireland, Poland and Yugoslavia.

176. Training courses for INFOTERRA NFP staff were conducted in Lisbon in July 1991 (for 10 staff from the Portuguese-speaking countries); in Nairobi in October 1991 (for 10 English-speaking NFP staff); and in Santiago (Chile) in November 1991 (for Spanish-speaking partners).

177. INFOTERRA's promotion efforts were rationalized in a number of areas in 1991. Expanding on the advantages of electronic processing (e.g. desk-top publishing), new design formats and materials were introduced

for partners' use. The *INFOTERRA Promotion Manual* was completely revised and all information tools (posters, leaflets, brochures, publications lists, etc.) were re-examined and updated. INFOTERRA staff took part in the UNCED preparatory process, attending meetings of the UNCED Working Party on Environmental Information and assisted in the drafting of the environment chapter for Agenda 21.

178. Four new Special Sectoral Sources (SSSs) joined the INFOTERRA network in 1991, bringing the total to 32. The latest additions were the Monitoring and Assessment Research Centre (for environmental data); the World Conservation Monitoring Centre (for biological diversity); the Division of Environmental Health of the World Health Organization (for environmental health); and the Global Centre for Environmental Research (for global changes). These centres are expected to enhance significantly INFOTERRA responses in the areas of environmental data conservation, biodiversity and endangered species.

INTERNATIONAL REGISTER OF POTENTIALLY TOXIC CHEMICALS (IRPTC) (*Budget line 7101*)

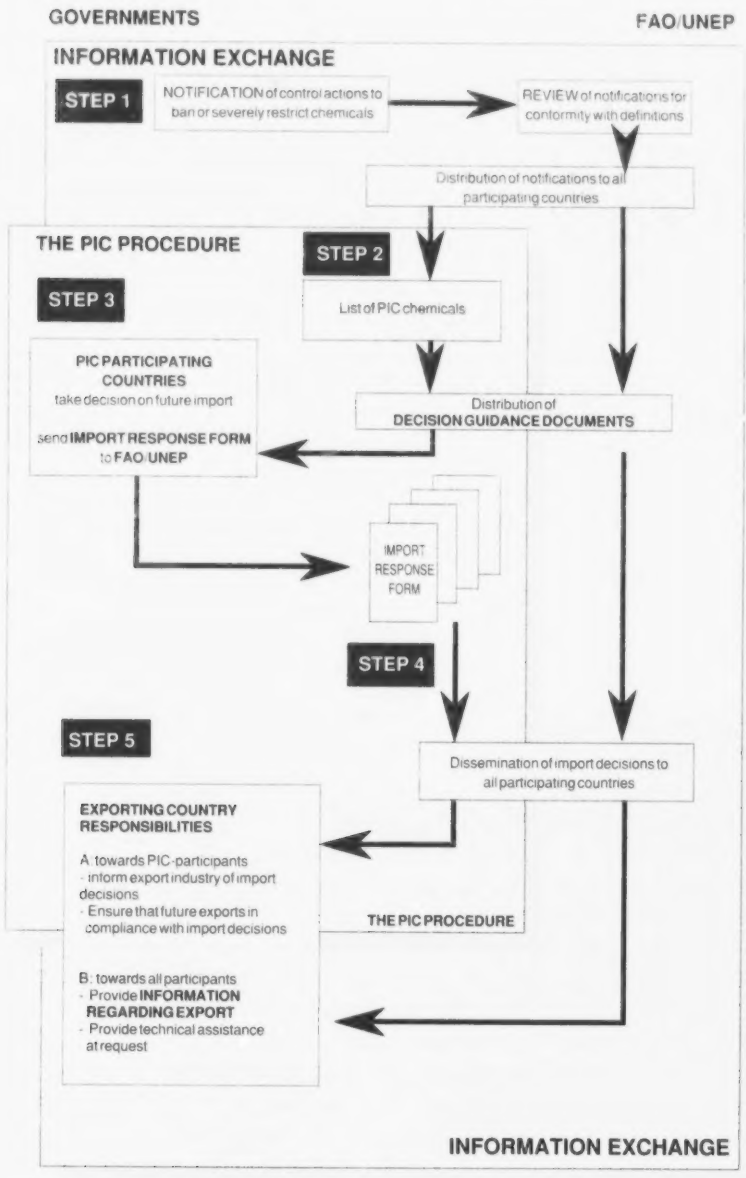
179. The essential role of IRPTC in coordinating the world-wide exchange of information and data on chemicals was reconfirmed in 1989 by the Governing Council in its decision 15/28, and further in 1991 in its decision 16/35, section I, in which it requested the Executive Director to take steps to help provide technical assistance to the developing countries for the implementation of the amended London Guidelines for the Exchange of Information on Chemicals in International Trade. One of the special achievements of joint IRPTC/FAO activities in 1991 was the initiation of the Prior Informed Consent (PIC) procedure under the provisions of the amended Guidelines and the International Code of Conduct on the Distribution and Use of Pesticides. Figure 4 presents the relationship between the general information exchange and PIC procedures under the amended Guidelines.

180. The joint programme with FAO to assist countries in the implementation of the PIC procedure was considerably expanded. The tasks under the programme included: the establishment of a joint database; the development of the network of Designated National Authorities (by 1 December 1991, 108 Governments had registered their National Authorities with FAO and UNEP); the development and preparation of Decision Guidance Documents on 16 banned and severely restricted chemicals; and the "Guidance for Governments" to be used by National Authorities and decision makers in connection with national implementation of the PIC procedure. In cooperation with UNITAR and FAO and with financial support from the Governments of the Netherlands, Switzerland and the United States, IRPTC established a joint training programme on the implementation of the amended London Guidelines and PIC. Jointly with FAO and UNITAR, a regional workshop on how to implement the PIC procedure was held for countries of the Asia and Pacific region in Manila, (Philippines) from 29 July - 2 August 1991 and more workshops are envisaged.

181. During the year under review, the global network of national correspondents through

Figure 4

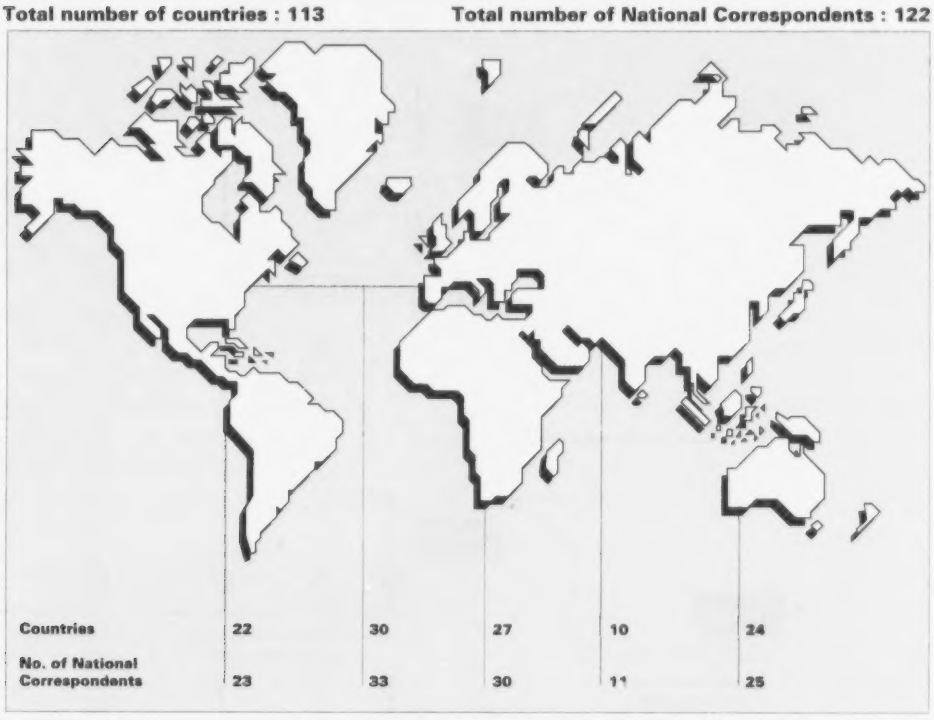
The relationship between information exchange and PIC procedure


GOVERNMENTS
FAO/UNEP
INFORMATION EXCHANGE
STEP 1
NOTIFICATION of control actions to ban or severely restrict chemicals
REVIEW of notifications for conformity with definitions
Distribution of notifications to all participating countries
THE PIC PROCEDURE
STEP 2
STEP 3
List of PIC chemicals
PIC PARTICIPATING COUNTRIES
take decision on future import
send IMPORT RESPONSE FORM to FAO/UNEP
Distribution of DECISION GUIDANCE DOCUMENTS
IMPORT RESPONSE FORM
STEP 4
STEP 5
Dissemination of import decisions to all participating countries
EXPORTING COUNTRY RESPONSIBILITIES
A: towards PIC-participants
- inform export industry of import decisions
- Ensure that future exports in compliance with import decisions
THE PIC PROCEDURE
B: towards all participants
- Provide INFORMATION REGARDING EXPORT
- Provide technical assistance at request
INFORMATION EXCHANGE

which IRPTC operates expanded to 122 National Correspondents from 113 countries (Figure 5 shows the distribution of national correspondents by region). On-line mode data dissemination continued to take place in cooperation with the Canadian National Correspondent and the Environmental Chemicals Data and Information Network (ECDIN) of the EC.

Figure 5

IRPTC National Correspondents



182. In 1991 IRPTC's computerized central data files were further updated and expanded. Fairly complete data profiles exist for close to 800 chemicals, with particular attention being paid to incorporating selected chemicals in international trade, giving priority to chemicals that are banned or severely restricted. The thorough revision of the structure of the files continued, in order to improve further the quality of their content and output and to adapt them to recent developments, in particular data collection and dissemination in joint OECD country programmes.

183. As the IRPTC's mandate has increased considerably to include various computer-assisted tasks and has resulted in the growing complexity of managing different databases,

IRPTC organized an expert consultation in November 1991 to analyse the situation and develop a logical design for the IRPTC databank. The experts recommended a revision of the scientific data structure of the central files and advised on the technical redesign of the databank and on future data dissemination. The new version of the IRPTC database for use on microcomputers and the user's manual were further developed for issue to selected partners. In cooperation with the Government of the USSR, a regional workshop on the use of the PC version of the IRPTC database was held at the offices of the International Centre for Scientific and Technical Information in Moscow from 11 to 22 November 1991.

184. During 1991 data collection continued to focus mainly on the Legal and Waste Management Files. The IRPTC Legal File, which now contains entries for almost 9,000 chemicals covered by any legal instrument or guideline in selected countries and organizations, is prepared with the assistance of contributing countries. In a working group meeting with legal data contributors in June 1991 in Geneva, the PC system was demonstrated as a tool for data contributions. Working procedures and deadlines for the next issue of the Legal File scheduled for publication during 1992, were also agreed upon. The Waste File was updated and expanded, in terms of both content and number of chemicals dealt with. An expert consultation on waste management and disposal to finalize the data records for the File and give further guidance on the role and content of a technical manual, originally planned for November 1991, had to be postponed for technical reasons.

185. During the year under review IRPTC continued to provide support for the early implementation of the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, in cooperation with the Interim Secretariat and UNEP's Industry and Environment Office. Assistance continued to be provided, in particular in drawing up technical guidelines for the environmentally sound management of hazardous wastes and other wastes covered by the Convention.

186. The Query Response Service of IRPTC continued to answer questions received from National Authorities, academia, industry, IGO, NGO and interested individuals. A significant increase in the number of queries received was recorded for the year 1991 (during the whole of 1990, 423 queries were received on 765 chemicals). Many of the queries received in 1991 sought general information on chemical safety matters. Brief statistics are given in Table 8.

Table 8

Breakdown of queries received by IRPTC in 1991

Number of queries received	601	47% developed countries
Number of chemicals concerned	1 220	
Number of countries requesting information	98	53% developing countries
Number of agencies requesting information	21	
Subject of queries:	Agrochemicals	23%
	Environment	57%
	Legal	25%

187. The final draft of the executive summaries and monographs on the UNEP List of Selected Environmentally Harmful Chemical Substances, Processes and Phenomena of Global Significance was reviewed by an expert consultation in January 1991. Subsequently, the executive summaries were submitted to the Governing Council at its sixteenth regular session in May 1991 (see UNEP/GC.16/20). In its decision 16/31 the Governing Council requested that the Executive Director's report be referred to Governments and organizations for further study and action as appropriate; that comments on the report and the recommendations contained therein be obtained; that a review be made of the use of the List; and that a report be submitted to the Governing Council at its seventeenth regular session in 1993, along with a proposal for a possible further update in light of the review made. The monographs on the seven topics identified are being finalized, in close cooperation with the GEMS Monitoring and Assessment Research Centre (MARC), in preparation for their publication.

188. In cooperation with the Government of the USSR, in 1991 IRPTC continued to prepare and publish the series of *Scientific Reviews of Soviet Literature on Toxicity and Hazards of Chemicals*. Over 110 issues have now appeared in English and over 120 in Russian. In 1991 one issue of the *IRPTC Bulletin* (Vol. 10, No.2) was published in three languages and IRPTC contributed to the preparation of the third edition of the reference book *Occupational Exposure Limits for Airborne Toxic Substances*, published in English by the International Labour Office in the context of the IPCS.

189. With the support of the Government of the Netherlands, IRPTC's efforts to establish National Registers of Potentially Toxic Chemicals (NRPTCs), in particular in developing countries and in Central and Eastern Europe, were further pursued in 1991 with the development of the training and support programme. Under the joint IRPTC/UNITAR training programme, a subregional workshop to train both designated national authorities for the PIC procedure and NRPTCs was held in Kuala Lumpur from 9 to 13 December 1991 and addressed, *inter alia*, information system management, national inventories of chemicals and other information requirements. In cooperation with the Government of the USSR, IRPTC held two training courses (April and September 1991) for participants from developing countries on the use of data for control of chemical hazards.

190. The Governing Council in its decision 16/35 (section II) requested the Executive Director of UNEP, in cooperation with the Executive Heads of ILO, WHO and FAO, and in consultation with the OECD, the CEC and the UNCED Secretariat, to prepare draft proposals for an intergovernmental mechanism for chemical risk assessment and management; to convene a meeting of government-designated experts to discuss these draft proposals; and to submit the outcome through the appropriate channels to the UNCED Preparatory Committee at its fourth session in March 1992. To comply with this request, draft proposals as well as a current review of international activities in the field of chemical risk assessment and management were prepared and presented to an intergovernmental meeting convened in London from 16 to 19 December 1991, at the invitation of the United Kingdom Department of Health. IRPTC played an active role in the preparations for and organization of the intergovernmental meeting.

191. The meeting strongly endorsed the need for a mechanism in the form of an intergovernmental forum on chemical risk assessment and management. The purpose of the forum would be to provide policy guidance; develop strategies in a coordinated and integrated manner; provide the required political support; and foster understanding of the issues by Governments. The intergovernmental mechanism would be made up of UN Member States, with the participation of relevant UN organizations; the Chemicals Programme of the OECD; organizations representing regional geographical, political or economic groupings of countries; appropriate non-governmental organizations concerned with workers' interests, the environment, consumers and industry; a committee, comprising the chair of the forum and members elected by the forum to provide guidance to organizations collaborating in the IPCS and to carry out the business of the forum between meetings; and the cooperating organizations in an expanded IPCS. The meeting further endorsed the need for increased coordination among UN organizations on matters related to chemical risk assessment and management and the need to enhance the role of the IPCS. It was considered that the mandate of the IPCS should be extended explicitly to include risk management of chemicals. The meeting strongly recommended that the UNCED Preparatory Committee should invite FAO and other relevant United Nations bodies, including those engaged in the transport sector, as well as OECD, to cooperate in the IPCS.

GRID *(Budget line 4106)*

192. By Governing Council decision 16/25, GRID became a Programme Activity Centre within Earthwatch, with the following long-term goals:

- All major, global and regional environmental databases in the public domain are to be available, in appropriate forms, to a range of users - from politicians to scientists, to students - through the GRID system;
- All UN specialized agencies and most major intergovernmental organizations are to have access to GRID data and technology for the description, understanding and solution of environment-related problems;
- All countries in the world are to be provided with access to GRID data management technology and most are to have functioning GRID-compatible monitoring and assessment centres for national environmental assessment and management.

193. The year under review saw a rapid expansion of the GRID system, with the addition of seven new cooperating centres agreed between May and December 1991. In May 1991, a Memorandum of Understanding was signed with the Japanese National Institute of Environmental Sciences for the establishment of GRID-Tsukuba, within Japan's Global Centre for Environmental Research. GRID-Tsukuba brings a large number of environmental scientists into the GRID system, with particular interest in examining the merging of socio-economic data with environmental data. In June 1991, it was agreed that, as an expansion of an existing Memorandum of Understanding between UNEP and the International Centre for Integrated Mountain Development (ICIMOD) in Kathmandu, ICIMOD should be considered a GRID cooperating centre, with special responsibility for the Himalayan and Hindu Kush region.

194. In August 1991, the ISRIC in the Netherlands agreed to join GRID, in

cooperation with FAO and others, in using the expertise of ISRIC and of the soils experts with whom it is in contact to add ancilliary information to the global soils database currently held by GRID and FAO. GRID assisted ISRIC in obtaining the ARC/INFO software of the Environmental System Research Institute to ensure ISRIC compatibility with the GRID system. In October 1991, a Memorandum of Understanding for the establishment of GRID-Warsaw was signed. Through the terms of a bilateral agreement, the operations of GRID-Warsaw will be supported with the assistance of the Norwegian Ministry of the Environment. GRID-Warsaw began to carry out a number of geographic information system (GIS) support activities to study environmental problem areas in Poland, thereby marking the first step towards expanding the GRID network in Eastern Europe.

195. In November 1991, a Memorandum of Understanding was signed with the Meteorological and Environmental Protection Agency (MEPA) of Saudi Arabia for the establishment of a GRID cooperating centre in Jeddah to support the environmental assessment and analysis activities of the secretariat of ROPME. Also in November 1991, a Memorandum of Understanding was signed with INPE (Instituto Nacional de Pesquizas Espacias), the Brazilian national space research agency, for the establishment of GRID-Sao Jose dos Campos. This cooperating centre brings into the GRID system important data for the Amazon region, including a time series (1978, 1988-1991) of Landsat-derived data on fresh and natural non-forest areas, deforestation and infrastructure, and a base map. In December 1991, a Memorandum of Understanding was signed with the Ministry for Natural Resource Management and Environmental Protection of the USSR to establish a national, self-funded GRID-compatible centre in Moscow. GRID-Moscow will provide an important link to the global sources of data on boreal forests.

196. During 1991, several agencies and institutions expressed interest in being part of the GRID system, for example, FAO and the Centre of the Consultative Group on International Agricultural Research. As a part of its strategy for meeting its long-term goals, GRID continued to pursue a dialogue with institutions and agencies, focusing on initiatives emerging from the Asian subcontinent, the Pacific, Latin America and the Caribbean.

197. Although the GRID centres differ in terms of location, sectoral focus and sources of support, they have a common aim: to provide timely and reliable environmental information and access to a unique international data management service to help address environmental issues at the global, regional and national levels, in order to bridge the gap between scientific understanding of earth processes and sound management of the environment. Each centre is a focal point for environmental data management, for support to environmental applications projects and problem-solving using GRID-compatible technology, and for training and extension of that technology to Governments and agencies world-wide.

Global datasets

198. Several new global datasets were made available for distribution through GRID. These include the International Institute for Applied

Systems Analysis (IIASA) climate database from Leemans and Cramer, which encompasses long-term monthly average precipitation, temperature and cloudiness; the GLASOD Dataset from ISRIC and GRID-Nairobi, which contains a series of soil-related variables such as type, degree, extent, cause and rate of soil degradation; and updates to the time series of the National Oceanographic and Atmosphere Administration (NOAA) Global Vegetation Index (GVI) and WMO Climate Anomalies datasets for 1990. In addition, a new version of the National Aeronautics and Space Administration/Total Ozone Mapping System (NASA/TOMS) ozone data through 1990 was made available for distribution through GRID.

199. The final results of the Amazonia Tropical Deforestation study were made available to researchers in 1991, in the form of a 1-km resolution map, covering most of the Amazon Basin, showing the extent of forest and deforested areas, as derived from digital classification of the National Oceanographic and Atmosphere Administration/advanced very-high resolution radiometer - Large Area Coverage (NOAA/AVHRR-LAC) data from 1987-1988. The map fills a gap in the global "wall-to-wall" 1-km forest/non-forest dataset being assembled by a cooperating group of agencies under the EEC's Tropical Ecosystem Environment Observation by Satellite (TREES) programme.

Regional/National datasets

South-East Asia database

200. GRID-Bangkok, with assistance from the Thailand Meteorological Department, continued to develop a cloud-free, composited and georeferenced dataset using 1-km AVHRR data from the NOAA satellite series for the region covered by the Bangkok receiving station. The dataset is distributed through the GRID network for use in both the Tropical Forest Assessment Programme and the International Geosphere-Biosphere Programme Global Land Cover Project. A designated portion of the dataset will be further processed for forest/non-forest classification and verified by high-resolution satellite sampling and/or by ground-truth methods.

Kuwait surveillance

201. During and after the conflict over Kuwait, in 1991 intensive surveillance of the oil spills and the burning oilwells was carried out using earth resources satellites. GRID-Sioux Falls acquired satellite data of the Kuwait region (1-km AVHRR daily, and Landsat TM periodically) and processed these data on a daily basis. Data were transferred to GRID-Geneva via electronic network and photo products were sent to GRID-Nairobi and GRID-Geneva for analysis. The analyses were made available to the UNEP Task Force and to the King Fahd University of Saudi Arabia. Special base maps were produced for the UNEP Task Force and were supplied to the International Red Cross, to be used in planning and implementing humanitarian assistance to the region. Support was also given to the UNEP interagency consultation on environmental consequences of the conflict and to OCA/PAC during and immediately after the conflict.

Nordic and Baltic database

202. To strengthen cooperation with Finnish, Swedish, and other Nordic institutions working on environment data within the Baltic Sea catchment area, GRID-Arendal in 1991

established an office in Stockholm. GRID-Arendal completed an overview of sulphur and pH measurements in air, soils and water in Norway in 1991. The overview is to be extended to include the other Nordic countries. Through its Statistical Office, the ECE has taken the initiative to create a Baltic GIS which will be a joint project between ECE, the proposed European Environment Agency and GRID. GRID-Geneva, together with GRID-Arendal and GRID-Warsaw, will play an important role in developing, archiving and making the database available.

New AVHRR data holdings

203. GRID-Sioux Falls in 1991 provided a 5-year dataset of Eastern Europe and the USSR to GRID-Geneva for distribution. The dataset consists of the 1986-1991 growing seasons as 10-day averages of 1-km AVHRR data, plus a calculated Normal Difference Vegetation Index (NDVI) and other data. GRID-Sioux Falls began acquisition of data by NOAA-11 via on-board tape recorder for 1-km AVHRR data covering Mexico, the Caribbean and the northern part of South America with a frequency of five times per week. This area is not covered by any ground receiving station and the data will be useful to UNEP and others, such as the International Geosphere-Biosphere Programme Data and Information Systems Working Group, in building a global 1-km land cover dataset.

Pacific Basin

204. GRID-Bangkok in 1991 digitized the ecosystem maps of Western Samoa that had been prepared by the Pacific Conservation Data Centres of the Nature Conservancy in Honolulu, Hawaii. The datasets were made available to the Nature Conservancy, to the New Zealand Department of Scientific and Industrial Research, and to the Government of Samoa.

Himalayan region

205. In 1991, a joint venture with ICIMOD, MENRIS (Mountain Environment and Natural Resources Information System) and GRID-Geneva resulted in the creation of a database for the Bagmati Zone, (Nepal) and the Himalaya/Hindu Kush.

Phytogeographical data for Africa

206. During the year under review, a digital map showing phytogeographical divisions for the whole of Africa was produced by GRID-Nairobi. Based on ecologically sound geographic classification, compiled from many different sources, the map sets out the distribution of plants in terms of genetic adaptability.

Meta-database and the Master Directory

207. The development of GRID Meta-database System at Arendal, Geneva and Nairobi continued in 1991, with technical support from the United States Geological Survey EROS Data Center via GRID-Sioux Falls. Scheduled for release at the start of 1992, the system is an electronic catalogue of data holdings for the entire GRID network, designed to enable potential users of GRID data to identify and locate the data they need more easily. Portions of the meta-database that are accessible to the public will also be distributed on diskette, so that GRID users with personal computers can perform their own data searches.

208. The NASA Master Directory, which provides telecommunication access, went on line in April 1991 and was installed in GRID-Sioux Falls and GRID-Geneva. The Master Directory presently contains only NASA data, but will be populated with GRID data in the near future.

Applications support

Environmental assessment of freshwater resources

209. GRID-Geneva, together with a team from the International Lake Environment Committee (ILEC), in 1991 continued to assess the application of remote sensing and GIS to surface water quality management. The project continued its first phase (methodology testing on Lake Geneva and on Lake Biwa, in Japan) and in 1991 negotiations commenced on collaboration within the framework of the International Decade on East African Lakes (IDEAL) to be carried under the second phase. In addition, ILEC invited GRID-Bangkok, the Office of the National Environment Board and the Prince of Songkla University (Thailand) to assist in an environmental assessment of Lake Songkla. GRID-Bangkok provided scientific inputs into the assessment and trained the research staff of the University in data processing.

Biodiversity assessment

210. Since 1988, GRID-Nairobi has been cooperating with IGPBR in its activities on Socotra Island (Yemen) to survey the exceptional flora, map vegetation and collect germplasm samples from the 3,000-square-km island. GRID enabled IGPBR to assess the applicability of GIS to the field of genetic resource management. In the process, a digital database for a number of environmental parameters was developed, leading to the preparation of maps for use in field surveys and the development of models of vegetation distribution, based on limited site samples.

GIS for urban management and planning

211. GRID-Nairobi in 1991 continued its cooperation with UNCHS/Habitat to test the applicability and limitations of high- resolution satellite data in producing basic information relevant to urban management and planning. Within the cooperative work, satellite data are integrated with other data, including data on environment, land management and infrastructure, within a GIS environment to analyse the level and techniques of ground-truthing needed when working in cities of the developing world with minimum levels of staff, and to assess technical and financial resources. The first part of the project covers the cities of Manila and Dar es Salaam.

African elephant database

212. During 1991, GRID-Nairobi continued to house and update the African Elephant Database, development of which is funded through the EC and the Elsa Wild Animal Appeal, to assess the status and distribution of elephants across the continent, primarily for CITES. Making use of the latest field data and population modelling techniques, the batabase continued to be the most comprehensive source of information for policy makers.

Global Atlas of Desertification

213. In 1991, GRID continued to cooperate with UNFP's Desertification Control

Programme Activity Centre in the production of the Global Atlas of Desertification. All materials for the global and continental sections of the Atlas were prepared at GRID-Nairobi. These sections contain 35 maps and a large number of statistical tables and diagrams explaining the major features of land degradation at global and continental levels. The three major datasets used for the project were (a) climatic data obtained from the Climatic Research Unit, University of East Anglia (United Kingdom); (b) soil degradation data (GLASOD) obtained from ISRIC, Wageningen (Netherlands); and (c) global vegetation index satellite data, obtained from the National Oceanographic and Atmospheric Administration (United States). These data were prepared, combined and analysed using GIS and image processing facilities available at GRID-Nairobi. In the final step, the maps were designed and prepared in Nairobi and plotted at GRID-Arendal. Under the work to produce the Atlas, a number of new global and African datasets were also created.

Forest assessment

214. GRID continued to provide technical support and database accommodation for the world-wide efforts in global tropical forest assessment and monitoring. Within the context of Earthwatch activities, GRID continued to work in close collaboration with GEMS, FAO and the EEC/TREES programme. At the request of ECE, UNEP designated GRID-Geneva to serve as the coordinating centre for an experiment involving satellite monitoring of the effects of air pollution on European temperate forests. The project plan was finalized during 1991. In addition, under a Memorandum of Understanding with UNEP, the University of Zurich completed and reported the mapping of Swiss forests using AVHRR data.

Training and extension

215. Working jointly with the Office of the National Environment Board (ONEB) of Thailand, GRID-Bangkok in 1991 continued to develop a pilot project for a National Environment Database of Thailand. GRID-Bangkok assisted ONEB in methodology development, national database design, data processing, and production of high-quality outputs. As an integral part of the project, ONEB staff received practical training at GRID-Bangkok.

216. GRID-Nairobi supported FAO's "Regional training workshop on remote sensing for tropical forest cover monitoring" at Nairobi in November and December 1991 for 25 participants from ten African countries: Angola, Kenya, Mozambique, Nigeria, Sudan, Uganda, the United Republic of Tanzania, Zambia, Zaire and Zimbabwe. The participants were trained in interpretation of multi-data satellite images and methodology for forest cover change assessment, using high-resolution satellite data.

217. Within the context of the GEMS/UNITAR Africa Programme, in 1991 GRID-Nairobi supported training in Nairobi for environmental analysts from five African countries: Botswana, Mozambique, Uganda, the United Republic of Tanzania and Zambia. Following their training in GIS and image processing, the participants returned to their respective ministries with hardware, software and data in order to establish GRID-compatible national facilities.

218. As a part of GRID's mandate to advise and strengthen national Governments and institutions in developing countries in the fields of environmental GIS and satellite image-processing, and as part of the World Bank Programme for Environmental Information Systems in sub-Saharan Africa, a survey of GIS and image-processing software was carried out in 1991. The objective of the survey was to collect information about various GIS and image-processing software systems and publish a consolidated report for distribution to international organizations, national Governments and institutions interested in applying such rapidly developing technology.

219. To increase the use of GRID data in schools and to introduce GIS concepts to children, a series of data exchanges took place in 1991 between GRID-Geneva, the CERES project of the University of Southampton (United Kingdom) and the Royal Danish School of Educational Studies. The Danish part of the cooperation is expected to evolve into a new GRID cooperating centre in 1992, with responsibility for pedagogic and didactical developments, with special emphasis on curriculum development and post-facto evaluation of GIS training courses.

Donor contacts/Agency links

220. Industry support for the GRID programme in 1991 continued to be positive and forthcoming. The Environmental Systems Research Institute of Redlands (California, United States) provided a number of its ARC/INFO software systems to GRID-Warsaw, GRID-Sao Jose dos Campos, and to the ISRIC in Waginegen. Sun Microsystems Inc. approved a grant of four high-end workstations for GRID centres, the first of which was delivered to Sioux Falls in early November in 1991. IBM Switzerland made an outright donation of a very powerful RISC 6000 system, which was commissioned at GRID-Geneva and installed at GRID-Nairobi. IBM also lent one RISC 6000 workstation to Sioux Falls to enable software translation of Land-Analysis System (LAS) image processing software.

221. On several occasions during 1991, GRID-Geneva held several discussions with the European Environment Agency (EEA) Task Force concerning prospects for future cooperation, especially in data exchange and remote sensing. The actual database and analysis system in EEA will be a continuation of the former CORINE. Contacts were made with the European Statistical Office in Luxembourg and GRID-Geneva was put on line with that unit. GRID-Sioux Falls in 1991 continued the dialogue with the Atlantic Global Change Institute at the Bermuda Biological Station for Research, and the Institute began to provide GRID with its Atlantic regional datasets.

Monitoring and Assessment

THE GLOBAL ENVIRONMENTAL MONITORING SYSTEM (GEMS) (*Budget line 4101*)

Environmental Pollution

Human Exposure Assessment Locations (HEALS)

222. Environmental contaminants affect humans via air, water, or food and through dermal contact. To estimate the total exposure to these pollutants and protect public health,

an integrated approach is required, as applied in HEALs, which measures actual human exposure rather than ambient pollutant concentrations. The HEALs programme has evolved from its initial framework, whereby all member countries performed the same study of a pollutant using identical methodologies, into a format with flexible scope, whereby each country can choose its own priority pollutant to study at any location it deems to be affected by exposure to that pollutant. Twenty countries actively participated in the programme in 1991, each conducting human exposure assessment studies within an international framework.

223. The reports on the HEALs pilot phase studies conducted in seven countries (Brazil, China, India, Japan, Sweden, the United States and Yugoslavia) and covering nitrogen oxides, lead, cadmium and organic chemicals, were finalized and distributed in October and November 1991. Two technical reviews were produced by the Monitoring and Assessment Research Centre (MARC) of the University of London, namely *Endemic Fluorosis - A Global Health Issue* and *Mercury Contamination in Brazil - its impact on human health.*

224. Studies on six new pollutants - mercury, fluorides, volatile organic compounds, organic carbon, pesticides, suspended particulates and polycyclic aromatic hydrocarbons - were initiated in 1991 and the total exposure methodology was applied to Kuwait to determine human exposure to the constituents of oil fire plumes.

225. Under the HEALs programme, three information brochures were produced in 1991: on the programme itself, available in six languages); on sampling strategies; and on the major results of the pilot phase studies. A workshop on the statistical aspects of the human exposure survey was organized in Bad Elster (Germany) in 1991, with participants from all countries taking part in HEALs. The second international conference on human exposure monitoring and assessment, held in Atlanta (United States) in 1991, was co-sponsored by the HEALs programme and attended by several national HEALs coordinators.

Urban air quality

226. It is estimated that by the year 2005 every second person on earth will be resident in an urban area, which means that the quality of the urban environment is a major issue for the next decade and the next century. In 1991 the WMO/UNEP GEMS/AIR programme continued to respond to that challenge with a major effort to strengthen the cooperation and exchange of expertise between different cities and international programmes dealing with the urban environment and by a major reorientation and strengthening of the programme. Programme activities were reoriented along five major lines: method development (including modelling); technical support; global network operations; topic-specific and comprehensive assessments; and pilot studies.

227. GEMS/AIR analysed the effects of urban air pollutants on human health and on the total urban environment, including ecosystems, giving major attention to emissions inventories, modelling and the development of strategies to reduce harmful effects. During 1991, data from participating cities up to 1990 were collected and analysed. A synoptic report based on data for ten selected cities (Bangkok, Beijing, Bombay, London, Sao

Paulo, Shanghai, Tehran, Tokyo, Wroclaw, and Zagreb) and intended for the general public was prepared in November 1991. A comprehensive report and a summary report assessing urban air quality in twenty megacities in the world were drafted and presented to a government-designated expert panel in Geneva in November 1991. The assessment focused on major urban air pollutants - sulphur dioxide; suspended particulates; carbon monoxide; oxides of nitrogen; ozone and lead - together with emissions estimates and demographic, meteorological and socio-economic information. Work continued on a major update of the GEMS/AIR document on monitoring methodology in 1991. A UNEP/GEMS environment library publication on urban air pollution, based on the GEMS/AIR 1988 assessment, was published in October 1991. A government-designated expert meeting was convened in November 1991 to examine and review the GEMS/AIR publications.

228. During the year under review, regional audit teams were established in four developing regions (Eastern Mediterranean, South America, South-East Asia, Western Pacific) in order to calibrate equipment, validate the data collection process and provide on-site training and quality assurance support. Depending on the availability of funds, it is planned to repeat the exercise at regular intervals.

Food contamination monitoring programme

229. The data obtained under the collection round for 1986-1988 were collated and analysed and a summary report produced in April 1991. The report on the 1989-1990 analytical quality assurance studies and the evaluation report on the quality of the data stored, in cooperation with WHO and FAO, in the GEMS/FOOD global database in Geneva were finalized in May 1991 and distributed to selected institutes. An assessment report on aflatoxins in food; a UNEP/GEMS library publication on food contamination; and a report on dietary intake of heavy metals and pesticides were published in December 1991.

230. UNEP extended technical support to a number of countries in 1991 to strengthen the capabilities of institutes participating in the GEMS/FOOD programme. A training course was held in the Latin American and Caribbean region. During the period under review the seventh round of analytical quality assurance for institutes participating in the GEMS/FOOD programme was initiated.

Global fresh water quality

231. The implementation of phase II of the WHO/UNEP GEMS/WATER programme, which started in 1990, continued in 1991 and UNEP contacted a number of countries in order to secure their participation in the programme. Cooperation was strengthened with the WMO Global Run-off Data Centre, the European Monitoring and Evaluation Programme's component on acidification of freshwater resources; the Hydromet project in the Nile Basin; and ILEC. A regional workshop for countries that recently joined the programme was conducted in Rostov-on-Don (USSR) in October 1991. A training course on the use of the GEMS/RAISON software system for data handling, analysis and presentation was held in China in late 1991. GEMS/WATER supported the initial implementation of the programme component

of the Action Plan of the Zambesi River Basin dealing with monitoring and assessment. GEMS/WATER in 1991 also provided inputs for reviewing water quality in Nigeria and for assessing groundwater resources in the ESCAP region.

232. The second session of the GEMS/WATER steering committee was held in February 1991 at WHO, Geneva. A UNEP/WMO/WHO consultation on information needs for water quality assessment and management was held in Bratislava in August 1991. The report of that meeting was finalized and several further inputs were prepared for discussion at the Dublin International Conference on Water and Environment in January 1992.

233. The first two issues (March 1991 and September 1991) of the *GEMS/WATER Quality* newsletter and the second edition of the brochure *GEMS/WATER: The Challenge Ahead* were distributed. A programme document *GEMS/WATER 1990-2000* was made available in French, English and Spanish in 1991. The UNEP/GEMS environment library publication on freshwater pollution, a revision of the UNESCO/WHO/UNEP publication *Water Quality Surveys* and the GEMS/WATER data summary (August 1991) covering 1985-1987 were published in December 1991. Draft versions of the *GEMS/WATER Operational Guide* and the *Handbook on Field Techniques for Water Quality Monitoring* were issued. A review of freshwater quality issues on a regional basis led to the publication of the summary document *Water Quality: Progress in the Implementation of the Mar del Plata Action Plan and a Strategy for the 1990s in 1991*.

Monitoring and Assessment Research Centre (MARC)

234. MARC in 1991 continued to play an important role in the review and assessment processes related to GEMS/AIR, GEMS/WATER, GEMS/FOOD and HEALs. Throughout the year, an important part of MARC's work continued to relate to biological monitoring, which is considered an efficient and cost-effective tool to provide good quality environmental data and enhance environmental management, particularly in developing countries. The third edition of the UNEP Environmental Data Report was prepared by MARC in May 1991, reviewing the status of major national and international biological monitoring programmes. Biological monitoring also continued to be a component of the global environmental database being developed at MARC and of the environmental metadatabase being carried out through cooperation between MARC and the UNEP Harmonization of Environmental Measures (HEM) office in Munich.

235. Biological monitoring assumed great importance in the development of the second phase of the GEMS/WATER Global Water Quality Monitoring Programme in 1991, in which MARC played a central role (see paragraph 231 above). In addition, in September 1991 a MARC staff member attended a workshop of the Scientific Group on Methodologies for the Safety Evaluation of Chemicals in Cairo - "Methods for Assessment of Risk of Hazardous Wastes to Human and Non-human Biota" - and presented a paper on the use of wildlife species as monitors of hazardous waste sites.

236. MARC conducted a training workshop in November 1991 at the University of

Zimbabwe's Lake Kariba research station, emphasizing the requirements for water quality monitoring, the use of biological monitoring and other low-cost techniques, and ecosystem management. The workshop, for middle-management government, industry and university personnel, was held in anticipation of Zimbabwe joining the GEMS/WATER monitoring programme. MARC staff participated in drafting chapters on heavy metals for Volume 4 of ILEC's series *Guidelines of Lake Management*, in biological monitoring for the *GEMS/WATER Operational Guide* and in preparing the *FINNIDA Handbook for Water Quality Monitoring in Developing Countries*.

Renewable resource monitoring

Establishment of national environment information systems

237. The GEMS/UNITAR Africa Programme in 1991 conducted the third training course in methods of computerized GIS and Image Processing Systems for ten professional resource managers drawn from Botswana, Mozambique, Uganda, the United Republic of Tanzania and Zambia. The training course was held at the Regional Centre for Services in Surveying, Mapping and Remote Sensing in Nairobi from 21 January through 19 April 1991. In May 1991, GRID systems analysts installed computer hardware and software in the host institutions from which the ten participants had been drawn. The analysts also provided technical assistance to the participants in implementing six-month national pilot projects.

238. A national GIS seminar supported by the GEMS/UNITAR Africa Programme was held in Abidjan in June 1991 by the GEMS/UNITAR GIS unit which had been established in the Service Autonome de Télédétection (SAT) of Côte d'Ivoire in November 1990. At the seminar the results of the pilot project were presented and plans for future work and development of the GIS unit were formulated for presentation to donors. In cooperation with the UNSO and the World Bank Environment Division of the African Technical Department (AFTEN), the GEMS/UNITAR GIS unit in the Ministry of Environment Protection of Uganda held a similar seminar in August 1991.

239. With assistance from GRID, the GEMS/UNITAR Programme in 1991 drew on GRID's regional databases to create subregional and national-level datasets for distribution to the existing network of national GIS units and GIS users, in order to stimulate the creation of national resource databases. These databases cover, *inter alia*, climate, soils, topography, national boundaries, normalized difference vegetation index (NDVI), vegetation zones, woody biomass, land degradation, and disease vectors.

240. With support from UNSO, a five-year technical support programme for CILSS member States was developed at AGRHYMET in Niamey (Niger) in 1991. The programme, scheduled to start in early 1992, has three major components; an annual, eight-week training course in GIS for twelve participants; technical backstopping for operational GIS units; and annual technical seminars. GEMS/UNITAR assisted AGRHYMET in designing the syllabus and exercises for the first training course. Under the programme, discussions commenced with bilateral and multilateral organizations to secure long-term development support for

existing national environment information systems.

Early Warning

241. During January 1991, UNEP staff visited UN agencies to ascertain what Earthwatch monitoring and assessment activities were being undertaken, including activities that already served an early warning function or which had the potential to do so. The findings of the visits were discussed at an expert group meeting on early warning, held at UNEP headquarters in February 1991. The findings of this meeting were incorporated into a draft report of the Secretary-General on the follow-up to General Assembly resolution 44/224 of 22 December 1989, which also served as a basis for discussion by the UNEP Governing Council at its sixteenth session in May 1991. In its decision 16/37 the Council approved the activities pursued so far on monitoring, assessment and early warning and requested the Executive Director to report on progress to the next regular session of the Governing Council in 1993. The draft report of the Secretary-General and the Governing Council decision were subsequently considered by the General Assembly which, in its resolution 46/217 of 20 December 1991, stressed the need to strengthen international cooperation in the monitoring, assessment and anticipation of environmental emergencies and invited the Secretary-General to convey the report to the Preparatory Committee of UNCED.

242. A special item on Earthwatch was included in the agenda of the meeting of Designated Officials on Environmental Matters, held in London in September 1991. Agency representatives endorsed in principle the concept of monitoring, assessment and early warning within Earthwatch, but asked that the possible future role of each agency in those activities be spelled out further in a document to be developed by UNEP in consultation with them.

Radiation monitoring

243. The Global Environmental Radiation Monitoring Network (GERMON), operated by WHO and UNEP through GEMS within the framework of Earthwatch, became operational in 1991. The coordinating centre for the network lies at the International Reference Centre for Radioactivity at Le Vesinet (France), where the GERMON database is housed. Data began flowing into the database at the beginning of 1991, from both developed and developing countries, such as Argentina, Ethiopia, Indonesia and the United Republic of Tanzania.

244. Discussion with developing countries in 1991 revealed that a greater number would like to take part in GERMON, provided they receive assistance in obtaining and installing the necessary equipment, together with appropriate short-term training in its use. GERMON provides for some of the required equipment and training. Two short training courses were held in 1991; the first in France for countries in Africa, and the second in Australia for countries in Asia. GERMON is to produce annual global environment radiation situation reports, the first of which, for 1991, will be issued in mid-1992.

245. During the year under review, UNEP continued to support the IAEA-led interagency project to assess the health and environmental effects of the accident at Chernobyl and evaluate the protective measures taken. As part of its role within the Interagency Task

Force to address the consequences of the nuclear accident at Chernobyl, UNEP in 1991 evaluated the Chernobyl-related project proposals put forward by Belarus, Ukraine and the USSR. At the United Nations Chernobyl Pledging Conference, held in New York in September 1991, UNEP agreed to give financial support to the preparation of maps of radiation contamination levels within the country and to assist in further developing its geographic information system capabilities. UNEP also agreed to support activities to alleviate the environmental consequences of the Chernobyl accident, particularly activities involving environmental monitoring (including method development), training, data analysis and environmental rehabilitation.

Environmental data management

World Conservation Monitoring Centre (WCMC)

246. The expansion of the WCMC programme, which started in 1988 with the signing of the collaborative agreement between UNEP, IUCN and WWF, accelerated throughout 1991. The staffing of the Centre increased to 40 Professionals. In 1991 the Centre's GIS capability was increased and an environmental map library was elaborated. Progress was made in developing a GIS environmental database of Antarctica to support the proposed environmental protocol. The centre carried out an analysis of the conservation values of forest resources in protected areas of the tropics as a contribution to the FAO Forest Resources Assessment 1990 Project and mapped the tropical forests of Asia, Africa and Oceania. A Global Biodiversity Status Report was compiled, covering the status, management, utilization and economic values of biodiversity. In collaboration with IUCN, biodiversity guides were prepared for six countries of Africa and a review was carried out of the protected areas and the state of the environment in Eastern Europe.

247. In addition, in 1991 WCMC produced a three-volume *World Directory of National Parks and Protected Areas*. To assist the work of international agreements and convention concerning the environment WCMC in 1991, prepared a review of the trade in plant and animal species listed in the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). Information support was given to CITES, the Convention Concerning the Protection of the World Cultural and Natural Heritage, the Convention on Wetlands of International Importance, Especially as Waterfowl Habitat, and the Man and the Biosphere Programme. During the year a database was compiled for ITTO on international trade in tropical hardwoods and its impact upon forest conservation. A review of threatened plants and mammals of Europe was prepared for the Bern Convention on the Conservation of European Wildlife and Natural Habitats.

248. WCMC in 1991 continued its active involvement in the negotiations for the biodiversity convention and worked with UNEP to undertake the biodiversity country studies, including the establishment of national biodiversity units as centres for future monitoring. The operations and outputs of WCMC continued to make a direct contribution to the UNEP-GEMS programme, and all the GIS biodiversity datasets were transferred to UNEP-GRID.

Harmonization

249. The Harmonization of Environmental Measurements (HEM) programme based in Munich, continued to pursue the work programme agreed by two expert group meetings in 1990 and 1991. Activities basically fall into four areas: sectoral environmental measurements which, in cooperation with WMO, WHO and MARC, focused on air quality; natural resource classification, in conjunction with UNESCO, FAO, IUCN, WCMC and others, to devise globally applicable practical vegetation and land-cover classifications that can be used world-wide; preparation of a database and directory of standard reference materials used in analytical and quality assurance procedures with reference to the environment and preparation of a catalogue of databases (metadatabase) concerned with environmental monitoring and assessment, including quality assurance. The latter activity was being carried out by HEM in conjunction with MARC and WCMC. An expert meeting was held in October 1991 to develop the design of the metadatabase. The future direction of the HEM programme is guided by an international programme and technical advisory group. In 1991, Germany and UNEP jointly supported HEM but, in accordance with Governing Council decision 16/38, approaches were made to Governments in 1991 to seek further financial resources and staff for the HEM programme.

The Environmental Data Report

250. The UNEP Environmental Data Report represents the most comprehensive collection of global environment-related data currently available in a single volume and, as such, forms one of UNEP's most important regular publications. The third in this series of biennial reports was published in May 1991. Each edition of the UNEP Environmental Data Report contains a mixture of fundamental or "core" environmental datasets, that is, datasets which are retained and updated in each edition, as well as diverse collections of new material which reflect both environmental data gathering activities and emerging environmental issues of current concern. The UNEP Environmental Data Report is largely compiled by staff at GEMS MARC, with assistance from WRI and the Department of the Environment of the United Kingdom in compiling chapters on natural resources and wastes, respectively. During 1991, GEMS MARC continued to develop its computerized Global Environmental Database. The GEMS MARC database serves, *inter alia*, to support production of the UNEP Environmental Data Report series and to improve and facilitate dissemination of environmental data.

ENVIRONMENTAL MANAGEMENT MEASURES

ENVIRONMENTAL ASPECTS OF DEVELOPMENT PLANNING AND COOPERATION (*Budget line 2101*)

251. Following General Assembly resolutions 42/186 and 42/187 of 11 December 1987 on the Environmental Perspective to the Year 2000 and Beyond, and on the Report of the World Commission on Environment and Development, respectively, Governments and research institutions have been increasingly exploring ways and means of linking action for environmental protection and improvement to that for economic and social development.

Economic policies of pricing, taxation, trade, credit and structural adjustment are increasingly coming under scrutiny from the standpoint of their impacts on environmental management, just as environmental measures and policies themselves are being examined more closely from the point of view of their economic and social ramifications. The achievement of sustainable development requires the implementation of such policies, methods, procedures and institutional arrangements to allow practical reconciliation of the environmental, economic and social objectives in development. This cross-sectoral challenge is the focus of UNEP's work on environmental aspects of development planning and cooperation.

252. In 1991, UNEP reviewed and analysed the nature and scope of the follow-up that Governments and the organizations and bodies of the United Nations system were pursuing to implement General Assembly resolution 44/227 on environmentally sound and sustainable development, paying particular attention to ways and means of integrating actions for the environment and for development. The awareness of the need for an integrated approach to environment and development has increased greatly. A number of countries have prepared national policies, strategies and action plans for environmental management and sustainable development, covering various sectors and priority environmental issues. An integrated approach is also increasingly reflected in global negotiations and agreements on dealing with major environmental issues. Yet the persistently unbalanced international economic relations in trade, transnational investments, debt and finance make it practically impossible for many countries to apply the Precautionary Principle to environmental management, or to allocate the needed investment resources for environmental improvement or effect the policy adjustments necessary for environmentally sound and sustainable development. Secondly, Governments and UN agencies are still not paying enough attention to the composition and distribution of world economic growth in order to relieve pressure on natural resources and the environment, and to the harmonization of policy of social and institutional change, structural adjustment and economic reforms and environmental management that is essential to alleviate mass poverty and bring about sustainable economic development. The reports prepared on the basis of the review and analysis were submitted through UNEP's Governing Council and the Economic and Social Council to the General Assembly and to the Preparatory Committee of UNCED.

253. Based, in part on its long-standing collaborative programme with UNEP in the field of policies, planning and procedures for environmentally sound and sustainable development, in 1991 ECLAC prepared a regional framework for action entitled "Sustainable Development: Changing Production Patterns, Social Equity and the Environment", containing analysis, data and proposals for a regional input to the preparation for UNCED. The document highlights the need for and the feasibility of adjusting development strategies within the countries of the region, so that they bring about broader participation in the benefits of economic development and, at the same time, protect natural resources and improve environmental conditions. The framework for action also advocates the institutional change and sectoral and economic policy adjustment necessary to support needed changes in production patterns.

Focusing on methodological aspects, ECLAC, in collaboration with UNEP, prepared and disseminated guidelines and case studies from Argentina, Colombia, Mexico and Venezuela on the use of environmental impact assessment in development projects and programmes, and principles, guidelines and examples of the application of environmental and natural resource accounting in countries of Latin America and the Caribbean region..

254. In cooperation with ECLAC, UNEP continued to implement a programme to integrate environmental objectives into agricultural and urban development planning. Sites for the agricultural pilot cases have been selected in Chile, Mexico and Peru and agreements have been signed with the Governments. With regard to the urban pilot cases, a first report on Buenos Aires has been completed and Cartagena has been selected as a case study. A first training course on environmentally sound agricultural development was held in Santiago (Chile) from 21 to 31 October 1991 in collaboration with ILPES. Training materials were presented containing an exposition and synthesis of analytical methods of environmental management and planning, notably, environmental impact assessment, environmental accounting, cost-benefit analysis and integrated physical planning.

255. A number of reports of methodological interest for policy and planning were prepared and considered at expert seminars held in the region, (Quito, Ecuador, 15-17 March 1991; Santiago, Chile, 15-18 January and 1-3 July 1991). Among the reports were: Policies for detection and control of urban and industrial contamination; economic policy instruments for the improvement and protection of the environment; practical interpretation and application of the polluter pays principle; and formal quality assurance systems as a basis for environmentally sound management practices in the public and private sectors.

256. The implementation of the comprehensive training, information dissemination, awareness-building and technical cooperation programme that UNEP developed with SPREP for the benefit of South Pacific countries was delayed in 1991 due to inadequate staffing in the SPREP secretariat. With UNDP assistance, a full-time environmental impact assessment expert joined the secretariat which also mobilized resources from the Asian Development Bank and IUCN, in addition to those of UNEP, to prepare a comprehensive capacity-building and training programme for environmental impact assessment and environmental planning and management in the SPREP member countries. Under the UNEP/SPREP collaborative programme, a database on the policies, methods and procedures used for environmental planning and management in member countries will also be established in SPREP.

257. Following the Ministerial Meeting convened under the auspices of ESCAP in Bangkok in April 1991, which adopted a Regional Strategy on Environment and Development in the Asia and Pacific region, ESCAP and UNEP developed a joint programme to strengthen the analytical and information capabilities of selected applied research institutions in eight member countries in South and South-east Asia to backstop the efforts of governments and private enterprise to design and implement programmes for environmentally sound development. In the coming two years, the programme will focus on selected priority issues of environmental

management agreed by member countries of the region and will give particular attention to poverty alleviation and environmental accounting to relate development planning to environmental planning and management.

258. UNEP in 1991 continued to be involved in two major efforts to assist Malaysia and Nepal in the use of economic and sectoral policy adjustments, use of analytical methods and procedures and institutional strengthening to establish mutual support between development planning and administration and environmental planning and management. Owing to major changes in Nepal in 1991, there has been no opportunity yet to implement the conclusions and recommendations of the National Planning Commission/UNEP/UNDP joint project in the country.

259. In Malaysia, UNEP in collaboration with UNDP, FAO, WHO, WMO, ILO, UNIDO, UNFPA, IFAD and the World Bank, continued to assist the Government in preparing a policy and planning overview and a technical cooperation overview focusing on the interface between environment and development. This is a first step to help the Government develop a coordinated technical cooperation package to sustain its effort in planning environmentally sound and sustainable development, while mobilizing the effort of all concerned groups, including the scientific community and NGOs. The activity draws fully on Malaysian expertise from various government departments.

260. In cooperation with CIP (USSR), UNEP continued to carry out a programme of information exchange and expert consultation on methodologies for environmental planning and management, with particular focus on the centrally planned economies. As economic and political changes gathered momentum in these countries, the UNEP/CIP programme increasingly emphasized the role of the market mechanism, economic policies and private sector. Practitioners from the countries of Central Europe and Eastern Europe and from developing countries participated in the programme. Owing to the political developments, no new research or expert workshops were organized under this programme in 1991. However, UNEP continued work to edit, publish and disseminate a selection of technical papers and reports from the programme. By way of follow-up UNEP, in collaboration with ECE, developed a special programme for countries of Eastern and Central Europe. The programme comprises training and capacity-building in the use of economic policies and analytical methods in environmental planning and management as part of the economic reform process in these countries.

261. Under a joint United Nations Department of Technical Cooperation for Development (UNDTCD)/Government of Saudi Arabia/UNEP project a Senior Environment Adviser attached to the Ministry of Planning provided technical cooperation in strengthening institutional capacities, developing the national report on environment and development, assisting in introducing environmental objectives and considerations in the drafting of the national development plan (1990-1995), and elaborating operational development plans for the Meteorological and Environment Protection Agency, Riyadh Development Authority and for wildlife management.

262. Over the last few years there has been remarkable progress in research economics of the environment, particularly in the

developed countries. The benefit of this progress needs to be made available to the developing countries for policy and planning. In 1991 UNEP, in collaboration with Williams College (United States), which has a special post-graduate programme of training in development economics for administrators from the developing countries, designed and launched such a programme, which will also provide training at undergraduate level, focusing on environmental challenges faced by the developing countries. The collaboration also aims to develop a programme of applied research into environmental and resource economics, focusing on the major environmental challenges facing developing countries.

ENVIRONMENTAL LAW
(*Budget line 2105*)

263. By decision 16/25 of the Governing Council the Environmental Law and Institutions Unit was given a greater degree of autonomy in fulfilling its functions by being established as a Programme Activity Centre, see chapter IV, paragraph 39.

264. The Montevideo Programme for the Development and Periodic Review of Environmental Law, formulated at the Ad Hoc Meeting of Senior Government Officials Expert in Environmental Law in 1981, was adopted by the Governing Council at its tenth session in its decision 10/21. The Programme formed the basis of the Environmental Law and Institutions Unit's activities for a decade, whereby the Unit was responsible for the implementation of the Montevideo Programme through the development of international agreements, guidelines and principles; assistance to developing countries in the formulation of national legislation and the strengthening of institutions; the promotion and coordination of the environmental law-making process; and the dissemination of information on new developments in the field of environmental law. It was agreed at Montevideo that a review should take place no later than 10 years after the initiation of the Programme.

265. At the Second Meeting of Senior Government Officials Expert in Environmental Law for the Development and Periodic Review of Environmental Law, held in Rio de Janeiro from 30 October to 2 November 1991, a review of the implementation of the Montevideo Programme was conducted. A background report for the meeting, describing progress made towards achieving the objectives of the Montevideo Programme was published in August 1991 entitled *Review of the Montevideo Programme for the Development and Periodic Review of Environmental Law 1981-1991*. The meeting considered and reviewed the general approaches to the development of environmental law; the Montevideo Programme and its further development; new subject areas for the development of environmental law; enhancing the capacity of States, especially developing countries, to participate effectively in the development and implementation of environmental law; the progressive development and codification of environmental law; and methods of implementation, review and follow-up. The report of the meeting (UNEP/Env.Law/2/3 of 2 November 1991) was transmitted by the Executive Director to the Secretary-General of UNCED.

266. Pursuant to Governing Council decisions 14/26, 15/34 and SS.II/5, which established the legislative authority for the elaboration of

an international legal instrument on the biological diversity of the planet, the Ad Hoc Working Group of Legal and Technical Experts on Biological Diversity held its second negotiating session from 25 February - 6 March 1991. By its decision 16/42, the UNEP Governing Council renamed the Ad Hoc Working Group of Legal and Technical Experts on Biological Diversity the Intergovernmental Negotiating Committee (INC) for a Convention on Biological Diversity, affirming that the change of name did not mean a new negotiating body nor affect the continuity of the process of elaborating the convention. During theyear under review, the INC held its third (24 June-3 July 1991), fourth (23 September - 2 October 1991) and fifth (25 November - 4 December 1991) negotiating sessions. Steady progress was made during these negotiating sessions, with a number of articles of the draft convention undergoing a first reading and some a second reading. The fourth negotiating session resulted in the preparation of the third revised Draft Convention on Biological Diversity. A number of notes on the issues of access to biological diversity, technology transfer and financial mechanisms, as well as definitions and use of terms were prepared to facilitate the negotiating process.

267. UNEP's assistance to the Intergovernmental Negotiating Committee on a Framework Convention on Climate Change (INC/FCCC) included the secondment of a senior legal officer from the Unit to the INC Secretariat. During the third session of the INC/FCCC, held in Nairobi in September 1991, another senior legal officer was attached to the Secretariat to assist in its work.

268. Continuing its programme of collaboration with other UN agencies in the development of environmental law, UNEP liaised with these agencies in the preparations for the Rio Meeting on the Review of the Montevideo Programme. UNEP also participated in several meetings in the field of environmental law, including the symposium on "Developing Countries and International Environmental Law", held in Beijing (China) in August 1991; the UNEP/IMO/International Solid Waste and Public Cleansing Association (ISWA) Regional Workshop on Hazardous Waste Management Policies and Strategies (Mauritius, June 1991); a series of meetings with senior government representatives on the ratification of the Basel Convention in India, Malaysia, the Philippines and Thailand in March 1991; the ECE Ad Hoc Meeting on Environmental Rights and Obligations, held at the Hague (Netherlands) in July 1991; and the International Environmental Law Conference, held at the Hague from 10 to 14 August 1991.

269. The Unit continued its close association with the activities of OCA/PAC, especially in relation to the Regional Seas Programme and the programme of action to protect the marine environment from land-based sources of pollution. ELIU prepared a draft of a Protocol on the Protection of the Marine Environment from Land-Based Sources of Pollution for the West and Central African Region. Documents were also prepared on legal aspects of land-based sources of pollution for the Intergovernmental Meeting of Experts on Land Based Marine Pollution (Halifax, 6-10 May 1991) and for the draft strategy for the control of marine pollution from land-based sources.

270. In 1991, ELIU continued to provide assistance to developing countries and Eastern

European countries to strengthen environmental legislation and institutions. At the request of the Governments of Ethiopia, Guinea Bissau, Guyana, Mozambique, Swaziland and the United Republic of Tanzania, assistance was provided in the drafting of environmental legislation and related institutional arrangements. Initial missions were undertaken in Benin, Romania, Sao Tome and Principe and Zimbabwe to identify the needs of the countries. In addition to the above, UNEP is currently dealing with requests for assistance from the Governments of Botswana, Burundi, Central African Republic, Congo, Egypt, Gambia, Guinea Bissau, Jordan, Kenya, Lebanon, Lesotho, Libyan Arab Jamahiriya, Malawi, Mongolia, Namibia, Nigeria, Sierra Leone, Sudan, Trinidad and Tobago, Zaire, Zambia and Zimbabwe.

271. Under the publications programme, Volume II of *Selected Multilateral Treaties in the Field of the Environment* was published, containing the full text and synopsis of multilateral agreements in the field included between 1976 and 1989. This Volume, along with Volume I published in 1983, provides a comprehensive reference work on such multilateral agreements. Other publications released during 1991 include: *the Register of International Treaties and Other Agreements in the Field of the Environment; Review of the Montevideo Programme for the Development and Periodic Review of Environmental Law 1981-1991*; an information booklet on the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal; the *Report of the Meeting of the Group of Legal Experts to Examine the Concept of The Common Concern of Mankind in Relation to Global Environmental Issues*; and *Legal and Institutional Arrangements for Environmental Protection and Sustainable Development in Developing Countries*.

272. In accordance with Governing Council decision 15/30, the Ad Hoc Working Group of Experts on the Implementation of the Amended London Guidelines held one session in 1991. The Working Group reviewed progress in the implementation of the amended London Guidelines for the Exchange of Information on Chemicals in International Trade, in particular the PIC procedure; reviewed those activities related to production and use of chemicals that had been undertaken in countries and by organizations; and reviewed international legal instruments on the management of chemicals. The urgent need for technical assistance to developing countries, including establishment or strengthening of national institutions, was noted. At its first session, from 15 to 19 October 1990 in Nairobi, the Working Group had examined the draft model national legislation on the management of chemicals prepared by the UNEP secretariat. The text was revised by a small group of legal and technical experts in January 1991 and reviewed by the Working Group at its second session in Geneva from 8 to 12 April 1991. On the basis of the recommendation by the Governing Council in its decision 16/35, the UNEP secretariat is further developing model national legislation.

273. The preparation of a code of ethics on the international trade in chemicals was also discussed by the Working Group. Subsequently, by its decision 16/35, the Governing Council requested the Executive Director to invite the various private sector parties involved in international trade in chemicals to enter into commitments aimed

at achieving the objectives laid down in the amended London Guidelines and to prepare a code of ethics on the international trade in chemicals, in consultation with the international organizations concerned. The Governing Council in its decision 16/35 requested the Executive Director to reconvene the Working Group for further urgent action, including work on strengthening the legal basis of the amended London Guidelines, taking into consideration, *inter alia*, experience gained in the implementation of the Guidelines and the PIC procedure.

274. UNEP continued to act as the Interim Secretariat for the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal. Among the activities undertaken were the implementation of the resolutions of the 1989 Basel Conference; coordination of activities with other United Nations bodies and international organizations on matters relating to hazardous wastes; and measures to promote the entry into force of the Convention. Technical assistance and advisory services were provided to several countries in order to enable them to implement the provisions of the Convention. By December 1991, 52 countries and the EEC had signed the Convention and 15 countries had ratified it or acceded to it. The Convention enters into force 90 days after the twentieth instrument of ratification or accession has been deposited.

275. In accordance with resolution 3 of the Basel Conference, a working group of experts was established by the Executive Director to develop elements which might be included in a protocol on liability and compensation. The working group held one session in 1991 and agreed upon a list of elements. The group has requested the Executive Director to submit the list to the first meeting of the Conference of the Parties to the Basel Convention, which is expected to be held in 1992. With regard to resolution 8 of the Basel Conference, relating to the preparation of draft technical guidelines for the environmentally sound management of hazardous wastes, informal consultative meetings continued to be held in 1991 in order to prepare the draft which will be submitted to the first meeting of the Conference of the Parties to the Basel Convention.

276. In its decision 16/30 of 31 May 1991, the Governing Council requested the Executive Director to prepare, through the Interim Secretariat for the Basel Convention and in cooperation with other United Nations bodies and international organizations concerned, draft elements of an international strategy and an action programme, including technical guidelines, for the environmentally sound management of hazardous wastes. The draft technical guidelines, to be prepared in pursuance of resolution 8 of the Basel Conference, would consist of a part of the international strategy. As envisaged in Governing Council decision 16/30, an ad hoc meeting of government-designated experts on the subject was held in Nairobi from 9 to 11 December 1991 and provided elements of an international strategy and an action programme, including technical guidelines, for environmentally sound management of hazardous wastes.

The Ozone Secretariat

277. As the Secretariat for the Vienna Convention for the Protection of the Ozone Layer and its Montreal Protocol on Substances

that Deplete the Ozone Layer, UNEP in 1991 continued work on implementing the decisions of the Parties. As at the end of December 1991, 81 countries and the EEC were Parties to the Vienna Convention and 74 countries and the EEC were Parties to the Montreal Protocol. In 1991, the separate Ozone Secretariat became operational, to assume the duties of implementing the decisions of the Parties. The Secretariat comprises a Coordinator, Programme officers (scientist and lawyer) and an Administrative officer. In line with the decisions of the Parties to the Montreal Protocol, a Secretariat was set up in Montreal for the Interim Multilateral Fund for the Implementation of the Montreal Protocol.

278. Under the Vienna Convention, the first meeting of the ozone research managers of the Parties to the Convention was organized jointly by UNEP and WMO in Geneva from 13 to 15 March 1991. During the meeting, national and global research needs and goals were identified and discussed. These include research related to health and to the environmental effects of ozone modification, e.g. by means of systematic measurements of ground-level ultraviolet radiation.

279. The Second Meeting of the Ad Hoc Working Group of Legal Experts on Non-Compliance with the Montreal Protocol was held in Geneva from 8 to 10 April 1991. The meeting considered in detail the text of the non-compliance procedure, as approved by the Parties to the Montreal Protocol (Annex III of UNEP/OzL.Pro.2/3) and completed discussion of part of the document. In accordance with a decision of the Third Meeting of the Parties to the Montreal Protocol, held in Nairobi in June 1991, the Working Group held a third meeting in Geneva from 5 to 8 November 1991 and elaborated further the procedures on non-compliance. It considered the issue of expediting the amendment procedure under Article 9 of the Vienna Convention but recommended that the present procedures continue.

280. The second meeting of the Implementation Committee of the Non-compliance Procedure was held in Geneva from 11 to 13 April 1991. The Committee discussed in detail the non-compliance procedure that had been adopted by the Second Meeting of the Parties, with a view to establishing its specific terms of reference. It also considered the report of the Secretariat on the data reported by the Parties under the various provisions of the Protocol.

281. The Executive Committee of the Interim Multilateral Fund for the Implementation of the Montreal Protocol met five times in 1991. At the Meeting in Montreal from 15 to 19 April 1991, the Committee approved the revised budget for the Fund Secretariat for 1991, the Rules of Procedure for the meetings of the Executive Committee and the implementation guidelines and criteria for project selection. At the fourth meeting, in Nairobi on 17 and 18 June 1991, the Executive Committee approved the agreement between the implementing agencies (UNEP, UNDP and the World Bank); the work programmes and related budgets of the implementing agencies; and the budget for the operation of the Fund. At the fifth meeting in Montreal from 18 to 22 November 1991, the Committee reviewed the progress made and discussed the work programme for 1992.

282. The Second Meeting of the Conference of the Parties to the Vienna Convention for the Protection of the Ozone Layer was held in

Nairobi from 17 to 19 June 1991. The Parties took the following decisions:

(a) The Rules of Procedure for the meetings under the Vienna Convention were amended;

(b) The Ad Hoc Working Group of Legal Experts on Non-compliance with the Montreal Protocol was requested to consider procedures for expediting the amendment procedure under Article 9 of the Vienna Convention;

(c) The Parties were requested to facilitate, through bilateral or multilateral cooperation, national ozone research activities, scientific and technical training programmes for developing countries, as well as the expansion and improvement of the Global Ozone Observing System (GOOS) network.

283. The Third Meeting of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer was held at Nairobi from 19 to 21 June 1991, resulting in the following decisions:

(a) The Ad Hoc Working Group of Legal Experts on Non-Compliance with the Montreal protocol was given a specific mandate to discuss and make recommendations on the issues of non-compliance procedure and on expediting the amendment procedure under the Vienna Convention;

(b) The recommendation of the Implementation Committee of the non-compliance procedure to categorize Bahrain, Malta, Singapore and the United Arab Emirates temporarily as not operating under Article 5 paragraph 1 of the Protocol was approved. All other developing countries were considered to be operating under that Article;

(c) The Assessment Panels were requested to study the implications of an earlier phase-out of the controlled substances and to identify specific areas where transitional substances (these are the partially halogenated compounds listed in Annex C of the amended Protocol) are required, to facilitate the phase-out of the controlled substances as early as possible;

(d) The Open-ended Working Group of the Parties was given a specific mandate to consider any adjustments and amendments to the Protocol, if found necessary from the results obtained by the Assessment Panels;

(e) The Parties adopted a new annex to the Montreal Protocol, listing products containing controlled substances. After a specific date, those Parties which do not object to the list shall ban the import of these products from non-Parties;

(f) The proposals to raise the total amount of the Interim Multilateral Fund by $40 million to $200 million over the three-year period 1991-1993, and the selection of Mexico and the United States to act as Chairman and Vice-Chairman, respectively, for the second year of the Executive Committee of the Fund were endorsed.

284. A *Handbook for the Montreal Protocol*, incorporating all the amendments and adjustments adopted during the Second Meeting of the Parties to the Montreal Protocol, was published in May 1991 and widely distributed. Based on suggestions made during the Third Meeting of the Parties to the

Montreal Protocol, the *Handbook* was revised and a new version was published at the end of 1991.

285. In November 1991, the Assessment Panels, established by the Parties to the Montreal Protocol at their first meeting in Helsinki in May 1989 in accordance with Article 6 of the Protocol, completed their efforts to update their 1989 reports. The Open-ended Working Group of the Parties to the Montreal protocol is to consider the reports, with a view to arriving at any further adjustments and amendments necessary and place recommendations before the Fourth Meeting of the Parties to the Montreal Protocol, to be held in Copenhagen in November 1992.

286. The updated report of the Scientific Assessment Panel observed that ozone depletion was larger than predicted and that its adverse impacts could be minimized by advancing the phase-out schedules of the controlled substances and by including more ozone-depleting substances such as methyl bromide, HCFCs and HBFCs in the list of controlled substances for control measures. The Environmental Effects Panel confirmed its earlier conclusions regarding the adverse effects of ozone depletion on human beings, animals, plants and materials.

287. The main conclusions of the Technology and Economic Assessment Panel were: consumption of controlled substances by developed countries had already dropped by 40 per cent, well ahead of the present phase-out schedule; technologies to eliminate the controlled substances were now available for virtually every application; the developed countries could virtually phase-out their use by 1995-1997, the developing countries doing likewise in another 5-8 years; the costs of a phase-out were decreasing.

288. In accordance with a decision of the Second Meeting of the Parties to the Montreal Protocol, the Technical Advisory Committee on CFCs Destruction Technologies was established in May 1991 to advise the Parties on the most appropriate destruction technologies for CFCs, halons and other listed chemicals. Its first and second meetings were held in Nairobi from 20 to 22 August 1991 and in Frankfurt from 18 to 20 November 1991.

289. In its decision 16/40, the Governing Council, *inter alia*, urged those States that had not already done so to ratify, accept or approve the Montreal Protocol and to ratify, accept or approve the Amendment to the Montreal Protocol adopted by the Second Meeting of the Parties, so that the Amendment could enter into force on 1 January 1992. The Council also urged the Parties to the Vienna Convention and the Montreal Protocol that had not yet done so to pay their contributions to the Trust Fund for the Vienna Convention and the Trust Fund for the Montreal Protocol, and urged those Parties to the Montreal Protocol that had not yet done so to pay their contributions towards the Interim Multilateral Ozone Fund as soon as possible.

ENVIRONMENTAL AWARENESS

ENVIRONMENTAL EDUCATION AND TRAINING
(Budget line 3101)

290. The third consultative interagency meeting, held at UNESCO Paris in November 1990 under the auspices of the joint UNESCO-UNEP International

Environmental Education Programme (IEEP) had laid the foundation for collaborative work between UN and other agencies in the field of environmental education and training. That meeting also laid the basis for what was to become in April 1991 the UNCED Working Paper on Environmental and Development Education and Awareness-building. The Working Paper attempts to define a strategy by which environmental education - the key to changing long-established patterns of social behaviour - could combat the unsustainable production and consumption patterns that are responsible for, *inter alia*, environmental degradation, loss of biodiversity, population growth beyond the capacities of systems and unplanned urbanization.

291. IEEP successfully concluded its Phase VII (1990-1991) with renewed emphasis on further exploring the environmental ethic concept. During the latter half of the biennium, at least 13 activities were conducted, among them two consultation meetings (one on environmental ethics) and eleven international/subregional/national training seminars or workshops on various other aspects of environmental education in the following countries: Ecuador, Egypt, Guatemala, India, Malta, Morocco, the Philippines, the United Arab Emirates, USSR and Zaire.

292. Preparation of environmental education materials continued to be a major IEEP activity in 1991. Four issues of the quarterly newsletter CONNECT were published (20,000 copies in six languages), with one of the issues aptly devoted to the search for an environmental ethic. In addition, model curricula outlines, guides, sourcebooks and new teaching/learning modules and posters on some of UNEP's areas of concentration were produced. The modules (covering oceans and coastal areas and their resources; soil resources and their protection; biological diversity; freshwater resources and global change) are being prepared as a contribution to UNCED. The preparation of national environmental education and training strategies for the 1990s, based on the International Strategy for Action in the Field of Environmental Education and Training for the 1990s continued to serve as a means of linking the global environmental situation (viz. global problems), with local actions (viz. local solutions) so as to protect the environment of each nation as well as the livelihood of its inhabitants.

293. During 1991, UNEP pursued its efforts to provide general environmental training to key cadres from developing countries. During the previous two years, the demand for the limited places on the courses offered had far exceeded availability. Therefore, UNEP negotiated with the Centre for Environmental Management at Tufts University, (Boston, United States) to organize a joint postgraduate programme in environmental management. The curriculum was drafted jointly and covers the main aspects of integrated management of resources, with specializations in most of the areas of concentration of UNEP. In the light of the positive evaluation of the first course held in 1990 and after suitable modifications in the curricula, a second course was held from September to December 1991 for 20 participants from 19 developing countries.

294. A one-month series of seminars on environmental management for high-level cadres from developing countries, with an invitation to attend sent to bilateral agencies working in the environmental field in developing countries, was convened in

Nairobi in November and December 1991, and organized with the support of UNESCO/ ROSTA. With the support of top management of UNEP, the seminars were conducted by directors and senior programme specialists of UNEP with, in some areas, the assistance of invited speakers. They shared with the participants their considerable field experience and methodological skills in selected areas of environmental management and, in return, the participants shared their national experience and outlook on environmental problems. The overall aim of all those involved in the seminars was to improve the methodologies of solving these problems so as to promote integrated and sustainable development.

295. The 10-months UNEP-UNESCO-Germany postgraduate course in environmental management, held since 1976 at the Dresden University of Technology, received a considerable boost in 1991 when the Government of Germany substantially increased its financial contribution to the course. The Inter-Secretariat and Selection Committee (UNEP, UNESCO, German authorities and Dresden University staff) met under the Chairmanship of UNEP in July 1991 and agreed on several changes to the course, including the involvement of German industry in the field of industry and the environment, an increase in the number of participants to 24 and, for the first time, the reserving of three places for participants from Eastern European States.

296. By the end of 1991, the fifth issue of *ET Worldwide*, (a compilation of information on training in environmental management around the world) had been finalized and distributed. The aim of the publication is to spread information on environmental training taking place in universities and institutes around the world to other universities, institutions and organizations. *ET Worldwide* is distributed to some 500 such centres around the world.

PUBLIC INFORMATION
(*Budget line 3103*)

297. In 1991 the growing interest in the environment was reflected not only in the large number of requests for information received from the public, non-governmental organizations and the media but also in the increase in UNEP's information and public affairs activities.

298. The "environment story" was widely disseminated in 1991, with the cooperation of regional offices, the Press Foundation of Asia, the Interpress Service of Latin America and the Caribbean, the Union of African journalists and a network of media contacts. Such activities highlighted regional concerns and issues. UNEP's media network was significantly expanded in 1991. Media interest has been stimulated through networking, resulting in articles about the environment, requests for interviews with UNEP's senior experts and invitations to participate in media and the environment seminars. Articles were written for various publications and workshop presentations were initiated on the role of the media in promoting environmental awareness.

299. Feedback from United Nations Information Centres (UNICs) around the world has shown that World Environment Day has become a day on which Governments and grassroots organizations participate actively in awareness building. The main

ceremonies on World Environment Day, held in Stockholm (Sweden) on 5 June 1991, were centred around the theme of "Climate Change: Need for Global Partnership". UNEP produced a comprehensive package on the subject for distribution to Governments. Media kits were also produced for the Global Assembly of Women and the Environment; the UNEP International Photographic Competition on the Environment, "Focus on your World"; and the tenth anniversary of the Montevideo Programme, the basis for all of UNEP's legal work.

300. In 1991, UNEP presented the annual "Global 500" awards to 48 laureates, bringing the total since the award's inception in 1987 to 426. The awards are for individuals and organizations who have made outstanding contributions to environmental protection and conservation. A network of "Global 500" award laureates was established, with a quarterly entitled *Global 500 Newsletter* as the focus. The newsletter is compiled and produced by the laureates and has become an important medium for the exchange of information and ideas among them.

301. Since its inception in 1984, the Sasakawa International Environment Prize has been awarded to leading international institutions and individuals throughout the world. The prize encourages environmental achievements in subjects that range from environmental health to information and legislation. In 1991 it was awarded to two distinguished experts in environmental law, Wolfgang and Francoise Burhenne from Germany.

302. During the year under review, UNEP continued to inform the world community about the priority activities in its programme by producing pamphlets, booklets, features and news releases, and through background papers delivered at media seminars on the environment. Special information kits were produced for Governments, NGOs and media in Africa on oceans and coastal areas, biodiversity and biotechnology, hazardous wastes and land and water. The African media were also served with a special radio programme on biodiversity and a video film on preserving the East African coastline. UNEP continued to work with the information sections of other United Nations organizations within areas of mutual interest, as well as with the Department of Public Information (DPI) at UN Headquarters. UNEP worked with IUCN and the World Wide Fund for Nature to launch *Caring for the Earth - A Strategy for Sustainable Living*, devised by scientists, Governments and conservationists. The strategy was launched on 21 October 1991 in more than 60 cities world-wide.

303. UNEP's Goodwill Ambassador Programme comprises four prominent individuals who, in their various capacities, promote the environment in general and UNEP's work in particular. The Ambassador with special responsibility for youth in 1991 worked on organizing a series of six unique expeditions called "Earthwalks", scheduled to take place during 1992-1993. Teams of students from around the world will participate in the expeditions, which will identify solutions to environmental problems while emphasizing the important role played by the individual.

304. In 1991 UNEP also reached out to thousands of young people through the Regional Youth Focal Points. The success of the activities during the year was seen in the inclusion of 22 island countries of the Pacific in the programme. In addition, the first youth

and Government seminar of its kind was organized in Eastern Europe.

305. The 17th World Jamboree of the Scout Movement took place in the Republic of Korea in August 1991, with the theme "Many lands, one world". The Jamboree was attended by over 20,000 scouts from 130 countries. An interesting initiative of the Scouts for this particular Jamboree was the Global Development Village. UNEP was involved in planning the "animation" of the village, by organizing ten different environmental activities specifically tailored to meet the needs of young people aged 14-24. A survey of 10,000 scouts indicated that the Global Development Village activities run by UNEP made a great impact. The Scouts also introduced an "environment badge" and established a "World Scout Environment Network" - activities based on a handbook on the environment that had been produced together with UNEP. With UNEP support, in 1991 the World Association of Girl Guides and Girl Scouts published an illustrated, two-volume training manual entitled *Water is life*, dealing with protection of freshwater resources. With UNEP's collaboration, an environment handbook was also produced by the League of Red Cross and Red Crescent Societies.

306. Four UNEP Regional Youth Focal Points are members of the International Youth Committee, ensuring inputs from young people around the world in the preparation of the "Youth '92 - World Youth Preparatory Forum for UNCED", to be held in Costa Rica in 1992. The objective of the Forum is to prepare a world youth statement on environment and development issues for presentation to government leaders and representatives of non-governmental sectors at UNCED. UNEP also provides financial support for the "Voice of Children Campaign", which will culminate in a "Global Hearing" in Brazil in 1992. This is being implemented by the Norwegian Campaign for Environment and Development and the Environment Defence Foundation in Argentina.

307. The Global Youth Forum on Environment has promoted awareness of global environmental issues, set up a network for young people and developed their leadership skills and confidence. UNEP's 1991 Global Youth Forum on the Environment was attended by some 1,150 "Earth Partners" in New York. The theme was climate change. UNEP continued to assist in coordinating the Outreach Network, a coalition of more than 500 local, national and international bodies involved in disseminating material on environment and health in the form of information packs published in Arabic, French, Portuguese and Spanish. The material has been used with particular success in curriculum development and for children's magazines. Outreach-inspired multinational environment and health programmes have been devised in the Caribbean and Southern Africa. An Outreach Unit was set up in 1991 to provide a high-level contact point to monitor activities and coordinate the provision of materials and services to organizations and individuals involved in Outreach activities.

308. The Global Assembly of Women and the Environment, convened under the sponsorship of the Senior Women's Advisory Group on Sustainable Development to the Executive Director, was held in Miami from 4 to 8 November 1991. It was the culmination of a series of four regional assemblies on women and environment held between

February 1989 and March 1991 in Ecuador, Thailand, Tunisia and Zimbabwe. The assemblies aimed to identify women who could act as leaders, experts and executors of activities that merge environment and development goals, and to define appropriate mechanisms to build active networks for information, assessment, project implementation and evaluation.

309. In 1991, UNEP continued to support the Environment Liaison Centre International (ELCI) in the publishing of 10 issues of the magazine *Ecoforum* in English, French, Spanish and Arabic. The magazine is a forum for NGOs and grassroots groups, especially in the South, to exchange information and experience and provide mutual support and to encourage cross-fertilization and networking among NGOs. UNEP sponsored the informal NGO roundtable for 1992, organized by ELCI from 16 to 18 May 1991 in Nairobi. The informal meeting was called to discuss and facilitate the development of a citizens' agenda for environmental action beyond 1992. The agenda is to be part of the NGO document to be presented to UNCED in 1992. UNEP worked with a new partner in 1991, the United Nations Non-Governmental Liaison Service (NGLS), to further reinforce links with the NGO community. UNEP's specific support was for the production and distribution of *E & D File 1992* and the bulletin *Go between*. Under the same support, UNEP purchased copies of the NGLS book *Women and Development*.

310. The UNEP Environment Sabbath, celebrated every year by religious communities on the weekend nearest to World Environment Day on 5 June, was established four years ago as a way to link spiritual values with environmental science. The 1991 Environmental Sabbath/Earth Rest Day guide *Our Children, Their Earth - Playing for Keeps* spotlights children and the environment, in recognition of the United Nations' special emphasis on their needs.

311. An international environmental photographic competition "Focus on Your World" was launched in 1991, with the support of the Canon corporation. A book is to be published using the photographs submitted in an innovative and educational way, with contributions from leaders world-wide. *Our Planet* continued to appear regularly in English, French and Spanish. The three editions reach a global audience of over 20,000. A database to record requests for information became fully operational in 1991. Some 5,000 letters were received and 30,000 publications were dispatched.

312. UNEP participated in six international exhibitions and fairs, and provided material to others. UNEP designed and produced a roving exhibition, "The Greenhouse", featuring current environmental issues. An exhibition on "Global 500 laureates was set up for World Environment Day 91 in Stockholm.

313. UNEP supported the production of television programmes through the Television Trust for the Environment (TVE) as well as the Moving Pictures project, a field distribution service whose task is to disseminate up-to-date programmes on environmental issues to television stations in developing countries. In 1991, the library lent out 1,872 programmes to 410 regular users and 89 new users in Kenya and abroad. A highly successful and widely disseminated video spot with an environmental message was conceived and produced in Nairobi.

LIBRARY AND DOCUMENTATION CENTRE

314. In 1991 the Library continued to collect and make available environmental, scientific and social information. During the year, 17,041 user visits were recorded. Of this total, 8,600 visits were by UNEP staff, 1,500 by UNCHS (Habitat) staff, 1,045 visits from other United Nations staff and 5,896 visits by individuals from embassies, permanent missions, universities and the general public.

315. In public services, the Library responded to 8,560 reference questions, provided 210 print outs of search results from the Library's databases and handled 4,032 loans of library material. In the provision of technical services, 1,000 books, periodical articles, scientific and technical reports and selected documents were catalogued and entered on the EPLIB (Environment Programme Library) database, bringing the total number of records in the database to 5,300. A collection of 1,500 periodical titles was maintained, of which 300 were purchased. Further, the Library arranged for the purchase of specialized books, technical reports and periodicals for internal use.

316. The Library continued its participation in the Nairobi Information Group, which is comprized of information personnel from most of the international organizations based in Kenya and which meets periodically to discuss new developments in the information field and acts as a user group for the Micro CDS/ISIS software of UNESCO.

CHAPTER IV

INTERGOVERNMENTAL LEGISLATION OF RELEVANCE TO UNEP

UNEP Governing Council

General policy

Programme matters

Financial and administrative matters

Economic and Social Council (ECOSOC)

General Assembly

INTERGOVERNMENTAL LEGISLATION OF RELEVANCE TO UNEP

1. During 1991, the Governing Council of UNEP, the Economic and Social Council and the General Assembly continued to monitor and guide the work of the UNEP Secretariat. The relevant legislative measures adopted by each of these bodies during the year under review are briefly described below.

UNEP GOVERNING COUNCIL

2. The Governing Council met for its sixteenth regular session in Nairobi from 20-31 May 1991, attended by 95 countries, 23 of which were represented at the ministerial level. In keeping with its decision 15/1, II, paragraph 2 (a), the Council established two sessional committees of the whole. The Programme Committee dealt with programme matters, including the implementation of the Plan of Action to Combat Desertification, as well as cooperation and coordination questions. The Fund Committee dealt with the Environment Fund and administrative and other financial matters.

3. Altogether, the Council adopted 47 decisions, 45 of these by consensus. The decisions fall into three general categories: matters of general policy (1-20); programme matters (21-43) and administrative and financial matters (44-47). As this was the last regular session of the Council before the 1992 UNCED, the Conference and its preparatory process featured prominently in the Council's deliberations. Indeed, not less than 17 of the 47 decisions adopted by the Council pertain to the Conference and/or its preparatory process. The Council even decided (16/3) to hold a special three-day session in February 1992, prior to the last session of the Preparatory Committee, to review UNEP's three major inputs into the Conference: first, a synthesis state-of-the-environment report, covering the two decades from Stockholm to Rio; second, a comprehensive report on the Plan of Action to Combat Desertification, including an evaluation of the validity of the Plan itself, a progress report on the implementation of the Plan, a report on the current status of desertification, and studies on how the Plan can be financed; and third, the Secretary-General's comprehensive report on follow-up to General Assembly resolutions 42/184 and 42/187 concerning the Environmental Perspective for the Year 2000 and Beyond and the Report of the World Commission on Environment and Development.

GENERAL POLICY

Decision 16/1 - Strengthening the role of UNEP

4. Recalling its decision 15/1 of 25 May 1989, the Council recommended to the

General Assembly that more effective arrangements be provided to ensure the coordination and direction of environmental activities in the UN system to enable it to meet the new and expanding requirements placed on it by the ever-increasing complexity of global environmental challenges facing the international community. Further, the Council supported the strengthening of the headquarters of UNEP and the retention of the programme activity centres already located there. Consequently, it invited the UNCED Preparatory Committee, when considering institutional aspects of environmental activities in the UN system, to take fully into account the Council's views and decisions, as well as relevant GA resolutions, regarding the strengthening of UNEP. It also decided that future major extensions to the physical or other infrastructure of the Programme, particularly those with global functions, be centred principally in Nairobi. Finally, having asked the Executive Director to inform all States of offers from Governments of major new facilities to be sited outside Nairobi and to seek comments for his guidance, the Council requested him to examine the feasibility of providing on-site interpretation facilities.

Decision 16/2 - Integration of environment and development

5. Stating its consciousness of the need to integrate permanently the twin functions of environment and development in the work of the UN system and in the perspective and follow-up action to UNCED the Council decided that its seventeenth session would focus in particular upon the integration of environment and development in UNEP's programme and in the follow-up actions arising from the decisions of UNCED. Further, the Council requested the Executive Director and the UNEP secretariat to contribute actively to solving technology transfer problems concerning developing countries, particularly in the pursuit of the concept of sustainable development. In addition, it suggested that the UNCED Preparatory Committee consider the feasibility of linking existing environmental databases with any new systems for collecting development data generated by the Conference process to help countries to take account of environmental concerns in their development planning.

Decision 16/3 - Special session of the Governing Council in 1992

6. In view of the fact that the General Assembly had decided (GA res.44/228) to convene UNCED, the Council decided to hold a special session from 3-5 February 1992 in Nairobi, approving as the sole substantive agenda items for the session the three following subjects all of which were of special relevance to UNCED: consideration of the synthesis state-of-the-environment report (1972-1992) to be presented to UNCED; the Plan of Action to Combat Desertification and its financing; and consideration of the Secretary-General's consolidated report on further substantive follow-up to GA resolutions 42/186 and 42/187.

Decision 16/4 - Periodicity and duration of Governing Council sessions

7. The Council requested the Executive Director to bring his proposals [1] on the organization of the plenary meetings of the

Council to its attention at its seventeenth session, taking into account the recommendations of UNCED.

Decision 16/5 - Rationalization of Governing Council documentation

8. Concerned about the volume of documentation for its regular sessions, the Council addressed a series of requests to reduce the number of documents for the sessions of the Council to the Executive Director. Having requested the Executive Director to investigate the possibility of making official documents of the Council available via electronic data networks, the Council also requested him to examine ways and means of helping Governments, particularly those of developing countries, to make use of such facilities. Finally, it urged the secretariat to accelerate the development of electronic mailing systems for public information uses.

Decision 16/6 - Review of the organization and management of UNEP

9. Recalling its decision on the strengthening of UNEP, as well as relevant GA resolutions, including resolution 44/228 on convening UNCED, the Council asserted that a better knowledge of the capacities and management structure of UNEP could help in planning adequate responses to the challenges ahead, including those resulting from the conclusions of UNCED. It therefore decided to invite the Executive Director to engage an internationally recognized consultancy firm to assess the management and organization of UNEP and to make the results available to Governments before 1 February 1992. In addition, the Council decided that, in the light of the conclusions of UNCED, the Executive Director should commission a second-phase study to advise on the future management and organization of UNEP and submit that study to the Council at its seventeenth session.

Decision 16/7 - Volunteers for the environment

10. Having considered the report of the Executive Director on the establishment of a "Green Brigade",[2] the Council recognized that there existed a broadly-based desire among individuals of all ages world-wide to take a more active part in environmental activities and that individuals and community organizations were increasingly expressing interest in exchanging information and experience. The Council therefore requested the Executive Director to provide information services, data, publications and reports, as well as technical advice, as requested, to assist NGOs and community organizations and to consult with representatives of relevant and competent national and international NGOs and explore further the modalities of cooperation with such organizations and to report thereon to the Council at its seventeenth session.

Decision 16/8 - World environment academy

11. Having considered the report of the Executive Director on a world environment academy, [3] the Council stated that the establishment of such an institution had to be considered within the context of discussion on legal and institutional issues that was taking place in the UNCED

Preparatory Committee. It therefore requested the Executive Director to bring this matter to the attention of that Committee and to report thereon to the Council at its seventeenth session.

Decision 16/9 - United Nations centre for urgent environmental assistance

12. Having taken note of the report of the Executive Director on a proposed UN centre for urgent environmental assistance, [4] the Council welcomed the participation of the UN agencies in assessing the capacity of the UN to deal with environmental emergencies,[5] and noted that an analysis of responses received indicated the need to improve the capacity of the UN to respond efficiently to such emergencies. Consequently, the Council endorsed the Executive Director's proposal to proceed with the development, on an experimental basis, of a UN centre for urgent environmental assistance acting in cooperation and in coordination with other UN agencies, focusing on assessment of and responses to man-made environmental emergencies. This mechanism was to be established on an experimental basis at the beginning of 1992 for a period of 18 months. Governments were requested to support the experimental mechanism by providing any necessary complementary financial and material resources. Finally, the Council requested the Executive Director to undertake, in consultation with other bodies of the UN system, an evaluation of the activities of the centre and to report thereon to it at its next regular session.

Decision 16/10 - Contribution of UNEP to international cooperation to address and mitigate the consequences of the accident at the Chernobyl nuclear power plant

13. The Council requested the Executive Director, in consultation with the coordinator of the Chernobyl programmes of the UN, to consider the possibilities of UNEP, within the practical implementation of GA resolution 45/190, to address and mitigate the consequences of this nuclear accident. The Council also exhorted States Members of the United Nations to participate in any activities of UN agencies, including UNEP, which might address the consequences of the accident. Lastly, the Council requested the Executive Director to report to the Council on the implementation of this decision at its seventeenth session.

Decision 16/11 - Military conflicts and the environment

14. This decision falls into two parts, the first of which (16/11 A) is entitled "The Environmental consequences of the armed conflict in the Gulf area". Taking note of the report of the Executive Director on the environmental consequences of the armed conflict between Iraq and Kuwait, [6] the Council made four requests of the Executive Director. First, it asked him to increase his efforts further to enhance cooperation among the UN bodies, intergovernmental organizations and Governments willing and able to provide the expertise and resources needed to deal with the environmental impacts in the affected and threatened regions. Second, the Council requested him to revitalize ROPME further and to strengthen its secretariat and its marine emergency mutual aid centre. The Council's

third request concerned assisting other regional organizations involved in the exercise. Lastly, the Council asked him to submit to it at its seventeenth session an updated version of the report called for in its decision 16/17 on hazardous environmental events.

15. The second part of the decision is entitled "Environmental effects of warfare" (16/11 B), in which the Council invoked the 1977 Protocol Additional to the Geneva Conventions of 1949 and Relating to the Protection of Victims of International Armed Conflicts, as well as the Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques. The Council appealed to Governments, in accordance with the principles of the UN Charter, to refrain in their international relations from the threat or use of force against any other State. It also recommended that Governments consider identifying weapons, hostile devices and ways of using such techniques that would cause particularly serious effects on the environment and that they also consider efforts in appropriate forums to strengthen international law prohibiting such weapons, hostile devices and ways of using such techniques.

Decision 16/12 - Effects of chemical weapons on human health and the environment

16. In this decision the Council unequivocally condemned chemical warfare, took note with appreciation of the Executive Director's report on the effects of chemical weapons on human health and the environment, [7] and requested him to make his report available to the Conference on Disarmament.

Decision 16/13 - The environmental situation in the occupied Palestinian and other Arab territories

17. Having taken note with appreciation of the Executive Director's report on this subject, [8] the Council once again expressed its concern that the Israeli occupying authorities had persisted in their practices and regretted that Israel had not provided the information requested, which meant that a complete database on the occupied Arab territories could not be prepared. It stressed the need for Israel to respond to the Council's decisions to enable the completion of such a database, as well as Israel's need to take the necessary measures to conserve natural resources, halt environmental deterioration, protect the human environment and ensure the well-being of the citizens in the occupied territories. The Council requested the Executive Director, pending a political solution by the UN, to take the actions and measures capable of halting environmental deterioration in these territories, provide the necessary assistance for protecting the natural resources in the area and secure harmonious living conditions for the entire population. The Council also urged the international community to provide various forms of support and assistance for the implementation of its decision, and requested the Executive Director to take all the necessary measures to complete the database mentioned above, to follow up the implementation of the decision and to report thereon to the Council at its seventeenth session.

Decision 16/14 - Regional and subregional programmes in Latin America and the Caribbean

18. Having considered the decisions of the Seventh Ministerial Meeting on the Environment in Latin America,[9] the Council endorsed those decisions and asked the Executive Director to support the plans and programmes stemming from them, as well as to provide for the implementation of the Regional Action Plan [10] in UNEP's core and supplementary programmes. Further, the Executive Director was requested to accord priority to the eight regional programmes that formed the basis of the Plan, together with the initiation of four new programmes. He was also asked to provide support for ongoing consultations and coordination among the region's Governments, as well as for the preparation and implementation of national environment plans. Additionally, he was asked to give effect to the expressed wish of these Governments to forge partnerships among UNEP, UNDP, the Inter-American Development Bank and the Global Environment Facility to implement the Plan's proposals. Lastly, the Council asked him to maintain and increase support for the programme and activities being carried out within the framework of the action plans for the South-East Pacific and the Caribbean regions and to encourage participating States to fulfil their pledges and commitments to the funds established for this purpose.

Decision 16/15 - State-of-the-environment reports

19. This decision is divided into three parts that deal, respectively with the 1990 report, that of 1991, and those for 1992 and 1993. In Part A, on the 1990 state-of-the-environment report entitled "Children and the Environment", the Council emphasized that inter-generational equity implied three conditions: first, each generation was required to conserve and utilize the natural resource base in an environmentally sustainable manner and pay due attention to the conservation of its cultural inheritance; second, each generation was required to maintain and improve the quality of the planet so that it might be passed on in better condition than it was received; and third, each generation should provide its members with equitable access to the benign legacy of past generations.

20. In addition, the Council emphasized that poverty, underdevelopment, inadequate health and sanitation services and environmental degradation are the main causes of mortality, morbidity and stunted growth and development of children. It also stressed the fact that children have the greatest stake in the preservation of the environment and its judicious management for sustainable development, as their survival and development depends on it.

21. The Council then requested the Executive Director to accord high priority within the UNEP programme to activities directed to the achievement of relevant goals and strategies enumerated in the World Declaration on the Survival, Protection and Development of Children and requested that priority be given to formal and informal environmental education of children; programmes to enhance the environmental awareness of children; and programmes to enhance the environmental awareness and the active participation of women in environmental protection measures for their

health and well-being and for that of their children. Finally, the Council requested that the Executive Director include in his 1992 Annual Report information on the implementation of the above proposed action.

22. Part B of decision 16/15 deals with the *State of the world environment 1991*. Having taken note of the Executive Director's report,[11] the Council requested him to continue to accord high priority to the negotiation of a convention on biological diversity; to accelerate activities related to the environmentally sound management of shared water resources; and to continue to develop and strengthen measures to facilitate improved protection and sustainable development of ocean and coastal resources and to address more effectively the serious growing problem of land-based sources of marine pollution.

23. Part C of decision 16/15 is devoted to the 1992 and 1993 state-of-the-environment reports. The Council, in taking note of the Executive Director's progress report on the comprehensive state-of-the-environment report ("Twenty years after Stockholm"),[12] requested him to expedite the preparations of the report so that it would be available for UNCED in 1992, as well as to the Council at its seventeenth regular session. Lastly, the Council requested that the Executive Director prepare the 1992 state-of-the-environment report on the issue of poverty and the environment.

Decision 16/16 - Emerging environmental issues

24. Having taken note of the report of the Executive Director on this subject,[13] the Council requested him to bring to the attention of all Governments the emerging environmental issues included in his reports. Further, the Council requested the Executive Director to continue to review the issue of new technologies with particular reference to their environmental impacts; to include in his 1993 report on emerging environmental issues a detailed examination of three additional subjects - re-use of waste water; volatile organic compounds in the air; and tropospheric ozone and to include in the same report a brief update of those issues dealt with in his 1991 report.

Decision 16/17 - Hazardous environmental eve ıts

25. Having noted the report of the Executive Director on the Alaskan oil spill[14] and having considered the report of the Executive Director on the environmental implications of the Iraq/Kuwait conflict,[15] the Council requested the Executive Director to bring to the attention of Governments the events described in these reports. In addition, the Council asked him to prepare as soon as possible a full scientific report on the environmental effects of the Iraq/Kuwait conflict, to make it available to the Committee of Permanent Representatives and to update the report on a regular basis. Finally, it requested him to keep under review the different environmental events and to report to the Council at its seventeenth session on these matters.

Decision 16/18 - Enhancing United Nations coordination of environmental activities

26. In this decision, the Council recognized that more effective arrangements had to be

provided to ensure the effective and comprehensive coordination and direction of environmental activities in the UN system to enable it to meet the new and expanding requirements placed upon it by the ever-increasing urgency and complexity of international and related environmental challenges facing the international community. The Council recommended that the Preparatory Committee for UNCED give priority consideration to ways and means of bringing about more effective arrangements for comprehensive coordination and direction of environmental activities in the UN system at the inter-agency level, as well as at the intergovernmental level, bearing in mind the experience gained from the institutional arrangements contained in the GA resolution that established UNEP, and taking into account, as appropriate, any other relevant considerations regarding UN system-wide or related international coordination.

Decision 16/19 - Reports of the Administrative Committee on Coordination

27. Having expressed its appreciation to ACC for its 1989 and 1990 reports, [16] the Council welcomed the Committee's support for national efforts to integrate environmental consideration into overall and sectoral development policies and for the inter-agency steering committee on integration of environmental considerations into development planning. The Council also welcomed the fact that ACC was encouraging its member bodies to undertake activities to analyse issues of a cross-cutting nature in the course of the preparatory process for UNCED. In addition, it supported ACC's views regarding UNCED, in particular that the Preparatory Committee for the Conference should give greater attention to the issue of the cumulative interaction between poverty, health and population, on the one hand, and, on the other, environmental degradation. Finally, the Council welcomed the attention paid by ACC to the issues of climate change, biological diversity, and the conservation and development of forests, as well as strengthening the role of UNEP and its Governing Council.

Decision 16/20 - Progress report of the Secretary-General on the implementation of General Assembly resolution 44/227

28. In this decision, the Council took note with appreciation of the progress report of the Secretary-General on the implementation of General Assembly resolution 44/227, which concerns the implementation of two prior Assembly resolutions, 42/186 and 42/187 on the Environmental Perspective to the Year 2000 and Beyond and the report of the World Commission on Environment and Development. The Council decided to transmit the report to the General Assembly at its forty-sixth session through ECOSOC and to the Preparatory Committee for UNCED at its third session.

PROGRAMME MATTERS

Decision 16/21 - Cooperation between UNEP and UNCHS (Habitat)

29. Noting with satisfaction the joint progress report of the Executive Directors of both the above bodies, [17] the Council

welcomed their increasing cooperation within the UN system-wide efforts, particularly in the four areas established by its decision 14/3, and requested the Executive Director of UNEP to continue and intensify this cooperation.

Decision 16/22 - Desertification

30. This decision falls into five parts. In the first, entitled "Implementation of the Plan of Action to Combat Desertification", having noted the report of the Executive Director on the Plan's implementation during 1989 and 1990, [18] the Council authorized him to submit his report, on its behalf, through ECOSOC, to the General Assembly at its forty-sixth session. The Council encouraged UNEP's ongoing efforts to compile a global assessment of desertification and to map thematic indicators of desertification at the global, regional and national levels. It also took note of the action of IAWGD to mobilize technical resources to assist the SADCC States to develop national programmes to combat desertification and to encourage reporting on activities relevant to the implementation of PACD. In addition, the Council invited donor Governments, intergovernmental bodies, aid agencies and NGOs to accord high priority in their bilateral and multilateral assistance activities to national programmes for combating desertification and for the rehabilitation of degraded land resources. It asked them, too, to take into account the promotion of long-term ecological and social rehabilitation programmes.

31. The Council requested the Executive Director to assist countries prone to desertification in developing programmes and to intensify his efforts to contribute to preparation, for UNCED in this area, reporting on his efforts to the Preparatory Committee for the Conference through, *inter alia*, the drafting of a consolidated report for the Committee's fourth session and submitting a progress report for its third. Lastly, it authorized him to convene the eighth session of DESCON as a session of special character devoted to a review of the draft consolidated report and also to invite all interested Governments, donor agencies and intergovernmental agencies to that session.

32. Part B of decision 16/22 is on the Financing and other measures in support of PACD. Having considered the report of the Executive Director on DESCON, [19] the Council recommended that, pending action by the General Assembly on the recommendations of UNCED, the mandate of DESCON should be changed to concentrate on information exchange, national programmes and the implementation of the PACD, and advising on further action against desertification. It also invited the international community to pledge voluntary contributions to local, national and regional mechanisms for financing the implementation of the Plan, and to create the necessary economic and financial conditions that would enable countries prone to desertification to appropriate part of their resources to combat desertification. Lastly, the Council requested the Executive Director to expedite the studies requested by the General Assembly of the Secretary-General on the financing of the PACD and other aspects of supporting it.

33. Part C of decision 16/22 deals with the implementation of the PACD specifically in the Sudano-Sahelian region. The Council

commended UNSO on the steps it had taken towards implementing the Plan in 22 countries of this region, particularly in the areas of natural resources management and sustainable development. It requested UNSO to strengthen its actions at the national level to assist Governments, *inter alia*, in developing national PACDs, as well as in incorporating them into national plans for sustainable development. Moreover, the Council urged UNSO to contribute fully to the preparation of UNCED, notably to the comprehensive report on desertification for the Conference. Lastly, it authorized the Executive Director to continue support to the Office as a joint venture with UNDP and invited him and the Administrator of UNDP to intensify efforts to mobilize resources for continued assistance to the countries served by UNSO.

34. Part D of the decision concerns the external evaluation of the PACD. Having taken note of the report of the Executive Director on the findings and recommendations of this evaluation,[20] the Council underlined the need for further refinement of the definition of the concept of desertification, taking into account recent findings about the influence of climate fluctuations and the resilience of soils. Additionally, it requested the Executive Director to forward the approved findings and recommendations, along with this decision to the Preparatory Committee for UNCED at its third session. Finally, it asked him to take these findings, as well as this decision, into account when revising the existing recommendations of PACD and to include these revisions in the Council's report to UNCED on the status of desertification and the implementation of the Plan of Action.

35. Part E of decision 16/22 is entitled "Implementation of General Assembly resolution 44/172 A." In that 1989 resolution, the Assembly had requested the Secretary-General of the United Nations, in cooperation with the Executive Director, to prepare, *inter alia*, a report containing financial and technical expert studies on ways and means to combat desertification effectively and a general evaluation of the progress achieved in implementing PACD, together with contributions from DESCON, for presentation to the Preparatory Committee for UNCED. The Council requested the Executive Director to expedite the comprehensive implementation of this resolution by providing his progress report to the UNCED Preparatory Committee at its third session, as well as his full report at its fourth session. Further, the Council requested him to undertake the appropriate measures to strengthen the Desertification Programme Activity Centre to enable it to discharge its responsibilities effectively and efficiently.

Decision 16/23 - Programme budget of UNEP for the biennium 1992-1993 and the supplementary programme for the biennium 1990-1991

36. This decision is divided into two sections, the first of which is devoted to the UNEP programme budget for the biennium 1992-1993, the second to the supplementary programme for the biennium 1990-1991. In the first, the Council, having commended the organizations of the UN system for their contributions to the preparation of the programme budget for the biennium 1992-1993, [21] called upon them to co-operate fully with the Executive Director in the implementation of this programme. It then

proceeded to approve, with several amendments, the programme budget of UNEP for the forthcoming biennium.

37. In the second part of this decision, the Council approved the adjustments to the supplementary programme, [22] with only two minor amendments, both concerned with climate change. The Council then authorized the Executive Director to implement the adjusted programme during the remainder of 1991 as and when resources became available, giving priority to four areas: the preparation of a draft convention on biological diversity; studies on the implications of climate changes and sea-level rise in coastal areas; activities in preparation for UNCED; and support to the participation of developing countries in technical and intergovernmental meetings convened by UNEP.

Decision 16/24 - Modification by the General Assembly of the medium-term plan of UNEP

38. In this decision, the Council, *inter alia*, responded to the recommendation contained in Assembly resolution 45/253 to delete subprogramme 9 of UNEP's medium-term plan, dealing with peace, security and the environment, and recalled that the Assembly, through its resolution 42/186, had adopted *the Environmental Perspective to the Year 2000 and Beyond* without change, including chapter III, section D, paragraph 86, which had defined the role of UNEP on issues of disarmament and security. In addition, the Council recommended to the Assembly that it maintain the high priority assigned by the Council to the preparation of multidisciplinary programmes for the environmentally sound management of water resources, that the title of subprogramme 13 be retained as "Technical and regional cooperation"; and that the text of paragraph 16.22 (a) (iv) be maintained as submitted.

Decision 16/25 - Strengthening of three main secretariat units through the establishment of programme activity centres

39. In this decision, the Council decided to change three existing entities within the Office of the Environment Programme into three new programme activity centres (PACs) so as to permit them a greater degree of autonomy in fulfilling the functions defined by the Council in an annex to this decision. The three new centres are the GRID Programme Activity Centre, the Industry and Environment Programme Activity Centre and the Environmental Law and Institutions Programme Activity Centre.

Decision 16/26 - Oceans and coastal areas

40. This decision is divided into three parts, the first of which is entitled "Marine pollution from land-based sources". The Council requested the Executive Director to continue preparing elements for draft strategy options and actions to reduce the degradation of the marine environment from land-based activities, in close cooperation with UNCED and other UN organizations, taking fully into account the experience gained by the regional seas programmes of UNEP and by other regional cooperative programmes in this area, as well as the recent Halifax Intergovernmental Meeting

of Experts on Land-Based Sources of Marine Pollution.[23] In addition, the Council decided to invite the Preparatory Committee for UNCED at its third session to provide policy guidance to a meeting of Government-designated experts to be convened to formulate a draft strategy, including a targeted and costed programme of action. To this end, the Council authorized the Executive Director to convene such a meeting and to initiate preparations without delay.

41. Further, the Council authorized the Executive Director to complete a targeted and costed action programme for the Mediterranean as an input to the strategy and as an example for the preparation of an international study. In addition, it requested that he report on the outcome of the meeting of Government-designated experts, through the Secretary-General of UNCED, to the Preparatory Committee at its fourth session. Finally, the Council endorsed the co-sponsorship of the intergovernmental panel on global investigation of pollution in the marine environment by UNEP and IOC.

42. The second part of decision 16/26 concerns strategies for the protection and development of the oceans and coastal areas. Having reviewed the note of the Executive Director transmitting the draft highlights of a report on strategies for the protection and development of the oceans and coastal areas, jointly commissioned by UNEP and IOC,[24] the Council welcomed the continuing cooperation between these two bodies and approved the completion of the strategy document. It also requested the Executive Director to arrange for the completed report to be submitted to it at its seventeenth session, as well as to the Preparatory Committee of UNCED at its fourth session through the appropriate channels.

43. In the third section of this decision, the Council requested the Executive Director to initiate action to facilitate the expansion of the Action Plan for the Protection of the Marine Environment and Coastal Areas of the South-East Pacific to include the Central American Pacific and also requested that he consider the possibility of providing the resources for this.

Decision 16/27 - Sea-level rise

44. This decision is divided into two parts. In section A, the Council took note of the report of the Secretary-General to the General Assembly on possible adverse effects of sea-level rise on islands and coastal areas, particularly low-lying coastal areas.[25]

45. Section B of the decision is devoted to sea-level rise vulnerability assessments. Recalling a variety of relevant reports, recommendations and decisions, including those of IPCC and the Ministerial Declaration of the Second World Climate Conference,[26] the Council urged Governments, UN specialized agencies - notably IOC - as well as relevant IGOs and NGOs, to support fully and participate in the activities of IPCC and the UNEP regional seas programme to assess the vulnerability of developing countries to this threat, particularly small island States, low-lying coastal States and other small islands. It also requested that the UNEP regional seas programme facilitate the capability building of developing countries to assess their vulnerability to sea-level rise and other potential impacts of climate change; identify

appropriate response strategies; and develop integrated coastal management plans. Lastly, the Council recommended that Governments, increase their support of these activities.

Decision 16/28 - Cholera and microbial pollution of the coastal waters of the South-East Pacific

46. The Council, stating its awareness that this particular region had been stricken by endemic cholera, requested the Executive Director, in coordination with WHO and other relevant organizations, to support and strengthen the cholera control measures taken by the South-East Pacific countries and called for prompt and decisive action on the part of UNEP in view of the direct relationship between cholera, coastal pollution and its causes. In addition, the Council requested the Executive Director to consider what support UNEP could offer to the South-East Pacific region for sanitary control action in coastal areas through established marine pollution programmes and to include such support among those measures that had to be urgently adopted.

Decision 16/29 - Assistance to Bangladesh on environmental matters in the wake of the devastating cyclone

47. The Council expressed its solidarity with the Government and people of Bangladesh during the tragic aftermath of this cyclone, and urged the Executive Director to provide and facilitate obtaining all possible assistance in short- and long-term measures for the protection of the environment in Bangladesh, including an urgent case study by UNEP on the country's coastal areas. Lastly, the Council appealed to Governments, IGOs and NGOs to extend all possible assistance to Bangladesh to mitigate the suffering of the victims and to prevent further consequences of the disaster.

Decision 16/30 - Hazardous waste

48. The first section (A) of this decision is entitled "Environmentally sound management of hazardous waste". Noting, *inter alia*, decision 1/22 of the Preparatory Committee for UNCED, by which the Committee had invited UNEP, in cooperation with FAO, WHO, UNIDO and other relevant organizations, to consider preparing elements for an international strategy for environmentally sound management of hazardous waste, [27] the Council requested the Executive Director to prepare draft elements for an international strategy and an action programme for environmentally sound management of hazardous waste. Further, the Council requested that he convene, in cooperation with other organizations as appropriate, a meeting of Government-designated experts to consider these draft elements, as well as a possible international strategy and action programme. The Council emphasized that the strategy and action programme might consider the pursuit of waste minimization as part of a broad cleaner production approach focusing on both products and processes from "the cradle to the grave". The important role of industry was to be recognized not only in developing new clean technologies, but also in introducing good operating practices for the minimization of waste. Such information should be made available to Governments as guidance for

the elaboration of national strategies for the environmentally sound management of hazardous wastes.

49. The Council also urged Governments that had not yet acceded to or ratified the Basel Convention to do so as soon as possible. Moreover, it asked the Executive Director to submit a report on the outcome of the meeting of Government-designated experts to the Conference of the Parties to the Basel Convention at its first meeting and to the Contracting Parties to the Bamako Convention at their first meeting. Additionally, the Council requested the Executive Director to report to the Preparatory Committee for UNCED at its third session on progress made, as well as to its fourth on the outcome of the meeting of Government-designated experts. Finally, it asked him to continue supporting the efforts of African Governments with regard to the entry into force of the Bamako Convention.

50. The second section (B) of decision 16/30 is entitled "Comprehensive approach to hazardous waste: recommendations for the implementation of Governing Council decision SS.II/4B" by which the Council had, *inter alia*, appealed to Governments and international forums to implement the precautionary approach through cleaner production methods. The Council now appealed to Governments and appropriate international forums to consider alternative cleaner production methods, including raw materials selection; product substitution; and clean production technologies and processes as means of implementing a precautionary approach in order to promote production systems that minimize or eliminate the generation of hazardous wastes and optimize use of raw materials, water and energy through, for example, recycling. In addition, the Council appealed to Governments, international and intergovernmental organizations to develop national and regional environmental policies based on the preventive approach.

51. The Council appealed further to Governments, international and intergovernmental organizations to develop national and international strategies based, *inter alia*, on: cleaner production programmes; accelerated work on reducing the use and emission of hazardous substances that are toxic, persistent and bioaccumulative; and integrated pollution prevention and control. Finally, the Council appealed to the international community to support Governments that so request in developing the policies and strategies outlined above and also requested the Executive Director to further develop and strengthen the International Cleaner Production Information Clearing-house.

Decision 16/31 - List of selected environmentally harmful chemical substances, processes and phenomena of global significance

52. Having considered and taken note of the updated report of the Executive Director on this subject,[28] the Council requested him to refer the report to Governments, relevant intergovernmental and international organizations, industry and NGOs for further study and action, as appropriate; to obtain their comments, particularly on the report's recommendations; to review the use made of the list and to submit the results to the Council in 1993 together with proposals for a possible update of the list in the light of the outcome of this review.

Decision 16/32 - Industrial accidents

53. Having considered the report of the Executive Director on this subject, [29] the Council noted with satisfaction the progress made in developing the APELL process and also took note of the recommendations of the senior expert advisory group at its second meeting. [30] The Council called upon Governments, the UN and its specialized agencies, as well as intergovernmental and international organizations, NGOs and world industry, to continue to support the widespread implementation of the APELL process to all industrial areas through generous financial contributions or technical assistance.

54. The Council took note of the progress made in identifying organizations and experts capable of providing information and assistance in the case of emergencies and requested the Executive Director to continue to develop the APELL process and the network for the exchange of information and technology for the prevention of industrial accidents and the provision of assistance in the case of emergencies.

Decision 16/33 - Transfer of environmentally sound industrial production technology

55. Having considered the report of the Executive Director on this subject, [31] the Council noted with satisfaction the progress in the gathering, processing and world-wide dissemination of information on cleaner production by the International Cleaner Production Information Clearing-house of UNEP's IEO. The Council called upon Governments, NGOs, industrial associations and academics to develop and initiate cleaner production activities and asked the Executive Director to support the initiation and development of cleaner production activities in different regions, to develop education and training activities to help institutions and Governments in developing cleaner production programmes, and to promote the identification of ways and means to facilitate access by and transfer of technology to developing countries in respect of cleaner production methods, techniques and technologies.

Decision 16/34 - International Environmental Technology Centre

56. Recognizing the increasingly serious environmental problems, including air and water pollution, in many developing countries, notably in their mega-cities, the Council noted with appreciation the progress towards the establishment of an International Environmental Technology Centre. It called upon the Executive Director to continue his efforts to work out the details of the Centre and to establish it and to ensure that the Centre's activities were fully coordinated with and complemented those of relevant UNEP units, including UNEP's IEO. The Centre was to be dedicated to the transfer of environmentally sound technologies to developing countries and countries whose economies were in transition with special emphasis on environmentally sustainable management of big cities and freshwater lake/reservoir basins.

57. The Council called upon the Executive Director to report to Governments, through the Committee of Permanent Representatives, on the outcome of the consultations with the Government of Japan before

proceeding to the Centre's establishment. Moreover, the Council decided that, if the Centre were established during the 1992-1993 biennium, financial support from the Environment Fund would be limited to the sum allocated to its Technical and Regional Cooperation, subprogramme 12, activity 6, devoted to the Centre of the programme budget for that biennium [32] on a trial basis.

58. The Executive Director was also requested to explore, within the context of this decision, the possibility of establishing centres of this type in equal numbers in developed and developing countries and to report thereon to the Council at its seventeenth session. Finally, the Council requested him to transmit this decision to the Preparatory Committee for UNCED at its third session.

Decision 16/35 - Toxic chemicals

59. This decision falls into two sections, the first of which (I) is devoted to the amended London Guidelines for the Exchange of Information on Chemicals in International Trade adopted by the Council in its decision 15/30, notably the Guidelines' provision for prior informed consent. Having noted that the FAO Conference at its twenty-fifth session in November 1989 had adopted amendments incorporating the prior informed consent procedure into the International Code of Conduct and the Distribution and Use of Pesticides, and noting with satisfaction that FAO and UNEP had been sharing the operational procedure, the Council urged Governments that had not yet done so to designate national authorities for the implementation of the amended London Guidelines, particularly the prior informed consent procedure. To this end, the Council recommended that UNEP continue developing model national legislation and strengthen consultations with ILO, WHO, UNITAR, FAO, GATT and OECD to enhance cooperation and harmonize activities concerning the implementation of the amended Guidelines.

60. Further, the Council requested the Executive Director to invite the various private sector bodies involved in the international chemicals trade to enter into commitments aimed at achieving the objectives identified in the amended Guidelines, as well as to prepare a code of ethics on the international trade in chemicals in consultation with the organizations concerned. The Executive Director was also asked to take further steps for the provision of technical assistance to developing countries for the implementation of the amended Guidelines.

61. The Council recommended that Governments take all possible domestic measures to ensure that their relevant ministries and departments were fully informed about prior informed consent procedures, and urged Governments to adopt national legislation or amend existing national legislation so as to incorporate necessary measures to implement the prior informed consent procedure. Finally, the Council requested the Executive Director to reconvene the Ad Hoc Working Group for further urgent action, including work on strengthening the legal basis of the amended Guidelines.

62. In the second section (II) of decision 16/35, the Council turned its attention to possible proposals for an intergovernmental mechanism for risk assessment and

management of chemicals. As a follow-up to decision 2/7 of the Preparatory Committee for UNCED, the Council requested the Executive Director to prepare, in cooperation with the UNCED secretariat, WHO, ILO, OECD, EEC and other relevant organizations, draft proposals for such a mechanism. Further it asked him to convene, in consultation with the Executive Heads of ILO and WHO - within the context of their collaboration under IPCS - and in cooperation with OECD, EEC, the Secretary-General of UNCED and other relevant international organizations - a technical meeting of government experts to consider draft proposals. Further, in consultation with the Executive Heads of ILO and WHO, and through the appropriate channels, the Executive Director was requested to submit to the UNCED Preparatory Committee at its fourth session a report on the outcome of the meeting.

Decision 16/36 - Regional activities within the International Geosphere-Biosphere Programme related to changes in the global life-supporting system

63. Having noted the final statement of the Scientific and Technical Sessions of the Second World Climate Conference, [33] the Council welcomed the initiative of the International Geosphere-Biosphere Programme (IGBP) to address regional problems of global importance through its Global Change System for Analysis, Research and Training (START). In addition, it appealed to all States to establish and support national committees for IGBP. Further, it stated that the START activities of IGBP in the developing regions deserved the support of Governments from within and outside the region concerned. Finally, the Council requested the Executive Director to provide support to the IGBP regional research centres and networks, which were to be planned and implemented in conjunction with WCP activities.

Decision 16/37 - Early warning and forecasting of environmental emergencies

64. Having underlined the importance of strengthening Earthwatch, the Council took note of the report of the Secretary-General on monitoring, assessment and anticipation of environmental emergencies, [34] and requested that it be brought to the attention of the General Assembly, together with the supplement summarizing the activities of the United Nations system. The Council considered assessments particularly necessary in all those areas of concentration it had identified in section IV of its decision 15/1 and enumerated in GA resolution 44/228 for consideration at UNCED. Further, the Council considered that Earthwatch should also be able to accommodate emerging issues as need arose. Consequently, the Council recommended that Earthwatch should continue its work in keeping with its mandate, and pay particular attention to the interface between environment and development.

65. Lastly, the Council requested the Executive Director to continue to strengthen the environmental monitoring and assessment capacities of developing countries to enable them to participate actively and more fully in Earthwatch and to prepare detailed proposals for ensuring adequate financial and institutional support

to enable Earthwatch to carry out fully its mandated programmes. Lastly, he was requested to report on those matters to the Council at its seventeenth session, on the basis of the decisions taken by the General Assembly on the Secretary-General's report.

Decision 16/38 - Improvement and harmonization of environmental measurement

66. Having considered the report of the Executive Director on this subject, [35] the Council noted that, with the support of the Government of Germany, the Office for Harmonization of Environmental Measurement had been established in that country, at Munich. Further, the Council noted that, apart from the voluntary contributions from that Government, no other contributions had been made and that without such contributions, the project would have to be terminated. Consequently, the Council requested the Executive Director to continue contacting Governments to seek support for the project and, further, asked that the Office continue conducting its activities. Finally, the Council appealed to Governments and international organizations to assist the project to fulfil its objectives by, *inter alia*, providing financial resources and seconding staff and called upon Governments and international organizations to participate actively in the implementation of the project.

Decision 16/39 - Freshwater resources

67. By its decision 2/20, the Preparatory Committee had invited the International Conference on Water and the Environment (to be held in Dublin in January 1992) to consider an action framework on sustainable development and management of freshwater resources. In its follow-up action, the Council noted with appreciation the UNEP contribution to the preparations for the Conference and requested the Executive Director to continue giving them full support.

Decision 16/40 - Protection of the ozone layer

68. Having noted the close inter-connections among the adjustments [36] and the Amendment [37] to the Montreal Protocol, as well as the fact that as of 22 May 1991, only $10,197,609 from a total of nine States had been contributed to the Interim Multilateral Ozone Fund, the Council urged States that had not already done so to ratify, accept or approve the Protocol. Second, States that had not already done so were urged to ratify or accept the Amendment so that it might enter into force on 1 January 1992. Third, the Parties to the Vienna Convention and to the Protocol were requested to pay their contributions to the Trust Fund of each instrument to enable the Ozone Secretariat to implement the decisions of the Parties. Fourth, Parties to the Protocol that had not yet done so were asked to pay their contributions to the Interim Multilateral Ozone Fund so that the various activities under the Fund might be conducted in a timely manner. Additionally, the Council endorsed the efforts of the Executive Director in promoting the establishment of this Fund and requested that he take appropriate actions expeditiously to develop and implement the programme of UNEP, as

an executing agency of the Fund, for the Fund's Executive Committee and to report thereon to the Council.

Decision 16/41 - Climate change

69. This decision has four parts. In the first (I), entitled "Protection of Global Climate", the Council urged States to support action aimed at protecting the global climate for present and future generations of humanity. In the second part (II), dealing with the Intergovernmental Negotiating Committee for a Framework Convention on Climate Change, the Council urged States to support the negotiating process. It also requested the Executive Director to support this process fully, *inter alia*, by contributing to its cost, by supporting the secretariat of the Intergovernmental Negotiating Committee through the secondment of an appropriate UNEP staff member, and by making available to the Committee's secretariat all relevant information and data collected by UNEP.

70. The third section of this decision (III) is devoted to IPCC. The Council expressed its appreciation to WMO for its cosponsorship of the IPCC, as well as to Governments and organizations for their support of its activities. Having commended the IPCC for completing its First Assessment Report in less than two years, the Council further urged Governments to strengthen their active participation in the work it was carrying out. Moreover, considering the need for further assessments of all aspects of climate change, the Council supported the IPCC's continuation and reaffirmed its terms of reference as set out in decision SS.II/3 B. It also urged Governments and organizations to continue and increase their cash contributions to the IPCC's Trust Fund.

71. The Council then requested the Executive Director to intensify cooperation between the IPCC and UNEP in the field of climate change impact assessments and to support expert consultations on the costs and benefits of dealing with climate change. Additionally, the Council welcomed the IPCC's recognition that the structure and the representation of developing countries in its bureau needed review and requested the IPCC, through its Chair, to report on the progress of its activities at the seventeenth session of the Council.

72. The fourth section of this decision (IV) concerns the World Climate Programme. Having urged all States to take appropriate steps to promote national climate activities and to support the World Climate Programme, the Council requested the Executive Director to assume responsibility for the World Climate Assessment Response Strategies Programme; to join WMO and other international agencies, which, together with UNEP, had cosponsored the Second World Climate Conference, in the future development of the World Climate Programme; and to join WMO, in consultation with UNESCO and its IOC, FAO, ICSU and other relevant organizations in establishing a Coordinating Committee for the Programme.

73. The Council further asked the Executive Director to intensify cooperation and communication between the World Climate Impact Assessment and Response Strategies Programme and related national,

regional and international climate activities, as well as to support the proposed intergovernmental meeting to discuss coordination and resources for the programme. He was also asked to support the creation of a Global Climate Observing System and to assist in ensuring that its development and implementation be pursued with urgency by scientists, Governments and international organizations. The Council further asked that he report to it at its seventeenth session on the progress of the World Climate Impact Assessment and Response Strategies Programme.

74. Finally, the Council requested the Executive Director to support research efforts, including those of IPCC and the Intergovernmental Negotiating Committee, to anticipate and respond to adverse impacts of climate change at the global and regional levels, to assist Governments in country-specific studies to estimate costs and benefits of dealing with climate change and identifying available technology and technology needs, to strengthen public information programmes on the role of climate in development and on additional risks posed by climate variability and change and to expand UNEP activities related to achieving greater scientific understanding of the impacts of climate change.

Decision 16/42 - Preparation of an international legal instrument on biological diversity

75. Having considered the report of the Executive Director on progress in the preparation of this instrument, [38] and noting the decision of the Ad Hoc Group of Legal and Technical Experts on Biological Diversity to recommend that a more appropriate name should be designated for it by the Council, the Council decided to rename it the "Intergovernmental Negotiating Committee for a Convention on Biological Diversity" and, further, affirmed that this change of name did not mean a new negotiating body nor have any effect on the continuity of its work. In addition, the Council affirmed that participation in the Committee would be governed by the rules of procedure adopted by the Ad Hoc Group at its second session. [39] Lastly, the Council invited the members of the Ecosystems Conservation Group to continue to provide technical assistance and legal support to the negotiations.

Decision 16/43 - International conventions and protocols in the field of the environment

76. Having taken note of the report of the Executive Director on this subject, [40] the Council authorized him to transmit the updated version, on its behalf, together with its comments, to the General Assembly at its forty-sixth session. Additionally, the Council requested him to make the report and the Register of International Treaties and Other Agreements in the Field of the Environment, [41] available to the Preparatory Committee for UNCED at its third session. Moreover, the Council called upon him, in furtherance of the Committee's objectives, to cooperate fully in reviewing the effectiveness of existing instruments in the field of the environment. Finally, the Council urged those States that had not already done so to sign, ratify, accede to and implement relevant conventions.

FINANCIAL AND ADMINISTRATIVE MATTERS

Decision 16/44 - The Environment Fund: use of resources in 1990-1991 and proposed use of resources in 1992-1993 and 1994-1995

77. Having considered the Annual Reports of the Executive Director for 1989 and 1990, as well as his report on the Environment Fund in 1990-1991 and the proposed use of projected resources in 1992-1993 and 1994-1995,[42] together with his comments on the report of the Board of Auditors in the financial report and audited accounts of the Fund for the biennium 1988-1989 and the observations of ACABQ thereon, the Council took note of his comments on the report of the Board of Auditors. It also expressed its appreciation to those Governments that had contributed or pledged to contribute to the Fund at a higher level in 1990, 1991 and beyond. Additionally, it reconfirmed the $100 million Fund target it had approved in 1989 by its decision 15/1.

78. Further, having noted the Executive Director's view that contributions totalling $250 million would be required by 1995, the Council affirmed the desirability of working towards a level substantially higher than that of the present and therefore called on all Governments to contribute or increase their contributions in accordance with the increased demands placed on the Programme. Nonetheless, it noted with concern that although the overall level of Fund contributions had increased, the number of contributing countries had fallen. Consequently it called on all Governments that were not contributing to make every effort to do so. Moreover, it again appealed strongly to all Governments to pay their contributions either before the end of the year preceding that to which their contributions related or as near as possible to the beginning of that year.

79. For the biennium 1992-1993, the Council approved an appropriation of $150 million, and an additional appropriation of $30 million, should additional resources (i.e. overall above the $150 million) become available. In the event of shortfall, the Council requested the Executive Director either to allocate the approved appropriation to the higher priority areas identified in the proposed programme budget for 1992-1993 with appropriate adjustments for other priority areas or to make a 15% cut in all programme allocations. He was requested to submit his proposed response to the Committee of Permanent Representatives and to act in accordance with its recommendations.

80. In respect of the Fund programme reserve for the coming biennium, the Council approved an appropriation of $5 million. It also reconfirmed the Executive Director's authority to adjust the apportionment of each budget line by 20% within the overall appropriation. Again, it stressed the need to maintain the Fund's liquidity at all times.

81. Additionally, it authorized the Executive Director to enter into forward commitments not exceeding $20 million for Fund programme activities in 1994-1995 and requested him to draw up a programme for that biennium with a core programme of $160 million and a

supplementary programme of $40 million. He was requested, too, to continue keeping the Fund's status under review and, in the event that he considered it necessary, to adjust the 1994-1995 planning figures and to report thereon to the Committee of Permanent Representatives. By contrast, in the event that contributions continued to increase at a high rate, he was to consult the Committee with regard to drawing up an additional programme. In either case, he was to act in accordance with its recommendations.

82. Finally, the Council made two more requests of the Executive Director. First, he was asked to report to the Committee of Permanent Representatives at its regular meetings on matters relating to programme implementation and planning, including expenditure and income profiles and planning assumptions at the programme activity level. He was also requested to continue ways of ensuring a wider and more stable basis for Fund contributions, including the possible use of indicative comparisons and to report thereon to the Council at its seventeenth session.

Decision 16/45 - Programme and programme support costs

83. Having taken note of the performance report on the programme and programme support costs budget for the biennium 1990-1991, [43] as well as the proposed budget for the biennium 1992-1993 [44] together with the related report of ACABQ, [45] the Council noted that during 1990, the Executive Director had been able to contain these costs within the yardstick of 33% of estimated contributions and that he would endeavour to do so in 1991 and future years. However, the Council noted with concern that this achievement had been based on a vacancy rate of 24%, which differed significantly from the planned estimate of 10%. It therefore requested him to make all possible efforts to reduce this vacancy rate with due regard to the 33% yardstick.

84. Reconfirming the total appropriation of $32,257,000 previously authorized for this biennium, including the supplementary appropriation, the Council approved an initial appropriation of $37,129,000 for the programme and programme support costs budget for 1992-1993 with the proposed expenditure pattern, on the understanding that the reapportionment of any savings due to a higher vacancy rate than expected would be subject to the recommendations of the Committee of Permanent Representatives. Further, for the coming biennium, the Council approved a supplementary appropriation for programme and programme support costs of $3,701,600, including $1,601,100 on a loan basis towards the construction of new office accommodation subject to ACABQ approval, as well as $2,100,500 towards the creation of new posts, making a total appropriation of $40,830,600.

85. After having established broad priorities, in the event of a shortfall in contributions, and approving a variety of personnel movements and increases, the Council requested the Executive Director to administer this appropriation with the utmost economy and restraint consistent with the effective implementation of the environment programme, bearing in mind the availability of resources, and, further, that he report to the Council at its seventeenth

session on the implementation of this budget during 1992.

Decision 16/46 - Trust funds

86. After having considered the Executive Director's report on additional sources of funding and management of trust funds, [46] the Council expressed its appreciation to Governments, intergovernmental institutions and other organizations that had increased their support to the programme by their contributions to trust funds, specific counterpart activities and contributions in kind. It then noted with approval the establishment of 10 technical cooperation trust funds and the extension of five more, as well as the closure of four. Turning its attention to general trust funds, the Council approved the extension of nine and the creation of one more. (The names and functions of the various trust funds are covered in Annex III).

87. Additionally, the Council invited Governments to continue and increase their support in the form of funds for UNEP's employment of additional staff, including staff from developing countries. In respect of JPOs, the Council stipulated that, as far as possible, staff from developing countries should be recruited. It also invited Governments to increase their financial support to specific activities within the programme, provided that such contributions did not diminish those to the Fund, and urged intergovernmental organizations, regional banks, NGOs and private corporations, too, to do likewise. Finally, the Council requested the Executive Director, in view of the proliferation of UNEP-administered trust funds, to evaluate the consequences of this development for the operation of the Programme and to produce options for reducing the number of such funds, as well as to report thereon to it at its seventeenth session.

Decision 16/47 - Global Environment Facility

88. Having considered the Executive Director's report on the GEF, [47] the Council welcomed the establishment of GEF on a pilot basis and endorsed the actions taken by the Executive Director to support it and to collaborate with UNDP and the World Bank, as well as the actions taken to establish the Scientific and Technical Advisory Panel. It also noted the concern expressed by some Governments about the use of the per capita criterion, which had the effect of excluding some countries. Additionally, the Council noted that UNEP was required to help ensure that the global policy framework for the facility was consistent with existing environmental conventions and related legal instruments and that experience generated by the Facility would be helpful in developing new treaties and agreements. Further, the Council noted that UNEP was to play a key role in helping developing countries to define their needs to deal with global environmental issues supported by the Facility and that the Programme would also disseminate information on existing and emerging technological developments.

89. Having approved the actions of the Executive Director in seeking to recover all legitimate costs from the Facility, the Council requested him to cooperate fully with UNDP and the World Bank in the

development and implementation of the pilot Facility. Finally, he was requested to include in his Annual Reports an account of UNEP's participation in the Facility, with regular interim reports to the Committee of Permanent Representatives.

ECOSOC

90. The Economic and Social Council adopted one resolution of direct concern to UNEP during 1991, namely resolution 1991/97, entitled "Combating aridity, soil erosion, salinity, water-logging, desertification and the effects of drought in South Asia." Having noted that no comprehensive assessments had been made of those problems in the region, ECOSOC requested the Secretary-General, in close connection with the Executive Director of UNEP and the Secretary-General of UNCED and other international and national development assistance organizations, to undertake a study to assess the extent of these problems and their effects on the peoples of the region. They were also asked to provide a framework for national and international cooperative efforts to tackle this problem in its physical and human dimensions, and to submit the study to ECOSOC in 1992. Further, ECOSOC appealed to the international community to provide expertise and assistance to further national efforts in the South Asian countries to take concrete measures to ameliorate the situation.

91. Additionally, in a procedural decision (1991/313) entitled "Reports considered by the Economic and Social Council in connection with the question of the environment" ECOSOC took note of four reports: the report of the Secretary-General on the implementation of GA resolution 44/227; the report of the Secretary-General on the possible adverse effects of sea-level rise on islands and coastal areas, particularly low-lying coastal areas; report of the Secretary-General on traffic in and disposal, control and transboundary movements of toxic and dangerous products and wastes; and the report of UNEP's Governing Council on the work of its sixteenth session.

GENERAL ASSEMBLY

92. In accordance with its established work programme which includes an item on the environment during odd numbered years, the General Assembly, at its forty-sixth session, adopted 11 resolutions and 5 decisions on the subject of the environment. As this unprecedented number of actions indicates, the environment continued to be a prime consideration in the political, economic and social spheres of the Assembly's work.

Resolution 46/41 A - Question of Antarctica

93. Having taken note of the report of the Secretary-General on a United Nations sponsored station in Antarctica, [48] the Assembly decided to keep the matter under review. It took note, too, of his report on the state of the environment in Antarctica, [49] requesting him to monitor and gather information on that situation and to submit an annual report thereon to the Assembly. The Assembly expressed its regret that despite its numerous resolutions on Antarctica, neither the Secretary-General

nor his personal representative had been invited to the meetings of the Antarctic Treaty Consultative Parties. Once again, it urged the Parties to issue such an invitation to their future meetings. The Assembly reiterated its call upon the Parties to deposit information and documents covering all aspects of Antarctica with the Secretary-General and asked him to submit his evaluations thereon to it at its forty-seventh session.

94. While welcoming the recent signing of the Madrid Protocol on Environmental Protection by the Parties, the Assembly expressed its disappointment that this instrument had not been negotiated with the full participation of the international community. It also expressed its concern that the Protocol lacked the monitoring and implementation mechanisms to comply with its own provisions and that it had not taken into consideration the call of the international community to ban prospecting and mining permanently in Antarctica. The Assembly underlined its call that any move at drawing up an international convention to establish a nature reserve or world park in Antarctica and its dependent and associated ecosystems must be associated with the full participation of the international community. It also reaffirmed the need to promote public awareness of the importance of Antarctica to the ecosystem.

95. Finally, the Assembly called upon the Antarctic Treaty Consultative Parties to increase cooperation and collaboration with a view to reducing the number of scientific stations on that continent. It also urged all members of the international community to ensure that all activities in Antarctica were carried out exclusively for the purpose of peaceful scientific investigation and that all such activities ensure the maintenance and protection of international peace and security and the protection of the Antarctic, as well as for the benefit of all human beings.

Resolution 46/44 - Effects of atomic radiation

96. Having commended UNSCEAR on its contribution since its inception to wider knowledge and understanding of the levels, effects and risks of atomic radiation, as well as for fulfilling its original mandate with scientific authority and independence of judgement, [50] the Assembly noted with satisfaction the continued and growing cooperation between the Committee and UNEP. It also requested the Committee to continue its work to increase knowledge of the levels, effects and risks of ionizing radiation from all sources and endorsed the Committee's intentions and plans for future activities of scientific review and assessment. The Assembly requested UNEP to continue providing support for the effective conduct of the Committee's work and for the dissemination of its findings to the Assembly, the scientific community and the public.

97. Further, the Assembly expressed its appreciation for the assistance rendered to the Committee by Member States, the specialized agencies, IAEA and NGOs, inviting them to increase their cooperation in this field. Finally, it invited Member States, the organizations of the United Nations system and the NGOs concerned to provide further relevant data about doses, effects and risks from various sources of radiation, which would help greatly in the

preparation of future reports of the Committee to the Assembly.

Resolution 46/150 - Strengthening of international cooperation and coordination of efforts to study, mitigate and minimize the consequences of the Chernobyl disaster

98. Having noted with appreciation the report of the Secretary-General on the implementation of its resolution 45/190 on this subject, [51] the Assembly welcomed the practical measures taken by the Secretary-General and the United Nations Coordinator of International Cooperation for Chernobyl to strengthen the coordination of international efforts in that area. The Assembly noted with appreciation the results of the United Nations Pledging Conference to mobilize support for extending international cooperation to mitigate these consequences. It again appealed to all Member States, intergovernmental and non-governmental organizations, charity foundations, the business community, scientific bodies and individuals to provide cooperation in various forms.

99. The Assembly requested the bodies of the United Nations system to continue the consideration of possible technical and other specialized assistance and specific actions in the areas most affected by the accident. It also requested the Secretary-General to continue the activities related to the coordination of efforts to this end and asked him to submit to it at its forty-seventh session, through the Economic and Social Council, a report on the implementation of this resolution.

Resolution 46/161 - Combating desertification and drought

100. Having reaffirmed its resolutions 44/172 A and B concerning the implementation of the Plan of Action to Combat Desertification, in which it had, *inter alia* invited UNCED to accord high priority to desertification control, the Assembly took note of the report of the Secretary-General on the implementation of the Plan in 1989 and 1990, including its implementation in the Sudano-Sahelian region, [52] and requested him to forward that report, as well as the report containing relevant expert studies on the struggle against desertification [53] to the Preparatory Committee for UNCED at its fourth session. Further, the Assembly endorsed decisions 16/22 A-E of UNEP's Governing Council, decision 91/41 of the Governing Council of UNDP [54] and decision 3/16 of the Preparatory Committee for UNCED. [55] In the last of these decisions, the Committee had requested the Secretary-General of UNCED to submit to it at its fourth session a report on the financial, technical and institutional needs to implement effectively and efficiently the decisions of the Conference concerning desertification control.

101. Welcoming the priority that would be given to the consideration of desertification by the Preparatory Committee at its fourth session, the Assembly also welcomed the efforts to combat desertification and drought undertaken by such African subregional organizations as CILSS, IGADD, SADCC, the Ministerial Conference for a Joint Policy to Combat Desertification and the Arab Maghreb Union, as well as the setting up of the Sahel and Sahara observatory. Additionally, it welcomed the continued

and substantial technical and financial assistance by UNSO to the countries of the Sudano-Sahelian Office to the countries of the Sudano-Sahelian region at the national and regional level in their preparations for the UNCED and encouraged UNSO to continue and intensify its assistance in that area. It also invited UNSO, within the framework of UNDP round tables and/or the World Bank Consultative Group, to assist the Governments of the Sudano-Sahelian region in organizing sectoral/thematic round tables in order to mobilize adequate resources for the protection and sound management of natural resources to arrest and reverse the process of desertification.

102. Finally, the Assembly requested the Secretary-General, in the light of the UNCED decisions concerning desertification and drought, to highlight any requirements necessary to implement those decisions in a report to be submitted to the Assembly at its forty-seventh session.

Resolution 46/167 - Women, environment, population and sustainable development

103. Recognizing the critical role that women play, both in the informal and formal sectors, in primary environmental care, in population programmes and in achieving sustainable development, and taking note of the recommendations of the symposium entitled "Women and Children First", organized by the UNCED secretariat at Geneva in May 1991, the Assembly requested the Commission on the Status of Women to make the relevant parts of the report on its thirty-sixth session, to be held in 1992, available to the Preparatory Committee for UNCED at its fourth session. Additionally, it called upon the relevant bodies of the United Nations system to coordinate and strengthen their efforts to contribute substantially to data collection and capacity-building in the field of women, environment, population activities and sustainable development.

104. Further, the Assembly urged the bodies of the United Nations system in their operational activities to ensure the integration of women as active participants at all levels in the planning and implementation of programmes for sustainable development. Lastly, it asked the Secretary-General to include a section on the role of women in environment and sustainable development in the report on effective mobilization and integration of women in development to the Assembly at its forty-eighth session.

Resolution 46/168 - UNCED

105. Having reaffirmed its resolution 44/228 on the Conference, the Assembly called for its full implementation. It reiterated, too, the fundamental interrelationship between environment and development, stressing the need to integrate fully the developmental and environmental dimensions and to keep the balance between them during the entire preparatory process and the duration of the Conference itself. Further, it emphasized the importance of integrating cross-sectoral issues fully into that work.

106. Stressing the importance of the regional meetings held within the framework of preparations for the Conference, it called

upon the Preparatory Committee to continue giving due attention to the recommendations of those meetings. It also took note of the Committee's reports on its second and third meetings and endorsed its decisions, notably decision 3/12, [56] which emphasized the importance of the participation of developing countries in both the preparatory process and the Conference itself.

107. Once again, the Assembly urged that representation at the Conference be at the level of head of State or Government. It also requested the Secretary-General to invite to the Conference all States Members of the United Nations or its specialized agencies and IAEA; representatives of organizations that had received a standing invitation from the Assembly to participate as observers in the sessions and work of all international conferences convened under its auspices; representatives of the national liberation movements recognized by the OAU; all executive heads of the specialized agencies and IAEA, as well as other organs, organizations and programmes of the United Nations system; all intergovernmental organizations that had been invited to participate in the work of the Preparatory Committee; and all NGOs accredited to participate in the Committee's work by the conclusion of its final session.

108. Having expressed its appreciation to the Governments and others that had contributed to the UNCED Voluntary Fund for the preparatory process, the Assembly decided to extend the Fund's validity and use so as to assist developing countries to participate fully and effectively in the Conference. It also asked the Secretary-General to mobilize the necessary resources to ensure such participation, notably that of the least developed countries, and urged Governments to contribute urgently and generously to the Fund to this end.

109. Finally, the Assembly decided to include in the provisional agenda of its forty-seventh session an item entitled "Report of the United Nations Conference on Environment and Development".

Resolution 46/169 - Protection of global climate for present and future generations of mankind

110. Having considered the report of the Secretary-General concerning the progress of the negotiations for a framework convention on climate change, [57] the Assembly took note with appreciation of the work of the Intergovernmental Negotiating Committee at its first, second and third sessions. [58] It urged the Committee to expedite and complete the negotiations as soon as possible, and to adopt the framework convention, containing appropriate commitments and any related legal instruments as might be agreed upon so that it could be opened for signature during UNCED. To this end, the Assembly decided that the Committee should hold a fifth session at United Nations Headquarters from 18-28 February 1992, with the possibility of a short resumed session in April unless the Committee decided otherwise at its fifth session. Additionally, the Assembly asked the Secretary-General to make appropriate arrangements for the work of the Committee and its ad hoc secretariat for the rest of 1992 in the light of the outcome of UNCED as to future steps in the field of climate change.

111. The Assembly also noted with

appreciation the contributions made to the special voluntary fund [59] to ensure that developing countries, in particular the least developed, as well as small island developing countries, could participate fully and effectively in the negotiating process and invited current and potential contributors to provide additional and timely funding for this purpose. Further, the Assembly expressed its appreciation of the initial trust fund for the negotiating process, [60] invited present and new contributors to provide additional funding in 1992 and take note of the arrangements made by the Secretary-General for the work of the Committee's ad hoc secretariat.

112. The Assembly reiterated its request to the Committee's Chairman, on the Committee's behalf, to submit a report to UNCED in 1992 on the outcome of the negotiations, as well as possible future steps in the field of climate change. Further, it requested the Secretary-General, in the light of the outcome of the negotiations and UNCED's work thereon to report to the Assembly at its forty-seventh session on the implementation of this resolution and possible future requirements concerning climate change.

Resolution 46/208 - Environment and International Trade

113. Recalling its 1990 resolution on this subject, [61] the Assembly welcomed the efforts of the United Nations Conference on Trade and Development to integrate the concept of sustainable development increasingly into its work and encouraged its Secretary-General to pursue that process. Further, the Assembly stressed the importance of the Conference on Trade and Development to the preparatory process for UNCED and its follow-up. Lastly it invited the Secretary-General of the Conference on Trade and Development to take the necessary action to pursue and expedite the studies and other work requested in paragraph 7 of the Trade and Development Board resolution 393 (XXXVIII), as a contribution to the UNCED preparatory process.

Resolution 46/215 - Large-scale pelagic drift-net fishing and its impact on the living marine resources of the world's oceans and seas

114. Recalling its two earlier resolutions on this subject, the Assembly commended the efforts to jointly collect statistically sound data on large-scale pelagic drift-net fishing in the North Pacific undertaken under the auspices of the International North Pacific Fisheries Commission. The Assembly called on the international community to implement its 1989 and 1990 resolutions on this subject.

115. Additionally, the Assembly reaffirmed the importance it attached to compliance with this resolution and encouraged all members of the international community to take individual and collective measures to carry out its provisions. It also requested the Secretary-General to bring this resolution to the attention of all members of the international community and inter-governmental and non-governmental organizations, as well as well-established scientific institutions with expertise concerning living marine resources. Moreover, it requested these members and organizations to submit to the Secretary-

General information concerning activities or conduct inconsistent with this resolution. Finally, the Assembly asked the Secretary-General to submit to it at its forty-seventh session a report on the implementation of the resolution.

Resolution 46/216 - International cooperation to mitigate the environmental consequences on Kuwait and other countries in the region resulting from the situation between Iraq and Kuwait

116. Having taken note of the report of the Secretary-General to the Security Council describing the nature and extent of the environmental damage suffered by Kuwait, [62] as well as decision 16/11 A of UNEP's Governing Council, the Assembly urgently appealed to all States Members, intergovernmental and non-governmental organizations, scientific bodies and individuals, to provide assistance for programmes aimed at the study and mitigation of the environmental deterioration of the region, as well as for strengthening ROPME and its role in coordinating the implementation of these programmes. In addition, the Assembly called upon bodies of the United Nations system, in particular IMO and UNEP, to pursue their efforts to assess and counteract the short-term as well as long-term impact of the environmental deterioration of the region.

117. Further, the Assembly requested the Secretary-General, through his Personal Representative, to render assistance to the members of ROPME in formulating and implementing a coordinated and consolidated programme of action and to allocate the minimum resources required to enable his Personal Representative to continue to help coordinate the activities of the United Nations system to that end.

118. Additionally, the Assembly requested the Secretary-General to submit to it at its forty-seventh session, through the Economic and Social Council, a report on the implementation of this resolution.

Resolution 46/217 - International cooperation in the monitoring, assessment and anticipation of environmental threats and in assistance in cases of environmental emergency

119. Having noted decisions 16/9 and 16/37 of UNEP's Governing Council, the Assembly stressed the need to strengthen international cooperation in the monitoring, assessment and anticipation of environmental threats and the rendering of assistance in cases of environmental emergency. Additionally, the Assembly took note of the report of the Secretary-General on the monitoring, assessment and anticipation of such emergencies [63] and invited him to convey it to the Preparatory Committee of UNCED.

Decision 46/417 - Exploitation of the environment as a weapon in times of armed conflict and the taking of practical measures to prevent such exploitation

120. Taking note that the protection of the environment in armed conflict was being addressed at the Twenty-sixth International Conference of the Red Cross and the Red Crescent, [64] the Assembly requested the

Secretary-General to report on its results to the Assembly at its forty-seventh session.

Decision 46/460 - Environment and agricultural policies

121. The Assembly invited the Preparatory Committee for UNCED at its fourth session, particularly in the context of Agenda 21, to consider the relationship between the environment and agricultural policies, *inter alia*, in the area of trade.

Decision 46/461 - Report of the Commonwealth Group of Experts on the Impact of Global Economic and Political Change on the Development Process

122. Taking note of the executive summary of the report of this Group of Experts, entitled "Change for the better: global change and economic development", [65] the Assembly requested the Secretary-General, in consultation with the President of the Economic and Social Council, to convene during the Council's regular 1992 session, a meeting devoted to an informal exchange of views on the conclusions and recommendations put forward by this report. In addition, the Assembly invited the Council's President to report on this meeting to the Assembly at its forty-seventh session.

Decision 46/462 - Report of the Governing Council of UNEP

123. Having considered the report of the Governing Council of UNEP on the work of its sixteenth regular session, as well as the ECOSOC decision 1991/313, in which the Council had, *inter alia*, taken note of this report, the Assembly took note with appreciation of the report and the decisions contained therein.

Decision 46/463 - Documents relating to the environment

124. The Assembly took note of the following documents: the report of the Secretary-General on possible adverse effects of sea level rise on island and coastal areas, particularly on low-lying coastal areas; [66] the report of the Secretary-General on traffic, disposal, control and transboundary movements of toxic and dangerous wastes; [67] the report of the Secretary-General on the implementation of its resolution 44/227, concerning sustainable development; [68] the report of the Secretary-General on large-scale pelagic drift-net fishing and its impact on the living marine resources of the world's oceans and seas; [69] and the note by the Secretary-General on international conventions and protocols in the field of the environment. [70]

Notes

1. UNEP/GC.16/4 and Corr.1 and 2, paras. 43-64.
2. *Ibid.*, Add.2, paras. 26-33.
3. *Ibid.*, Add.3, and Corr.1 and 2.
4. *Ibid.*, Add.2, paras. 11-25.
5. See UNEP/GC.13 and Corr.1, as well as UNEP/GC.16/12, concerning the reports of ACC for 1989 and 1990 respectively.
6. UNEP/GC.16/4, Add.1.
7. UNEP/GC.16/6.

8. UNEP/GC.16/5.

9. UNEP/LAC-IG.VII/4, annex 1; the meeting took place in Port of Spain from 22-23 October 1990.

10. *Ibid.*, annex 2.

11. UNEP/GC.16/9.

12. UNEP/GC.16/7.

13. UNEP/GC.16/9/Add.1.

14. *Ibid.*, Add.2.

15. UNEP/GC.16/4/Add.1.

16. UNEP/GC.16/13 and Corr.1 and UNEP/GC.16/12 and Corr.1.

17. UNEP/GC.16/11.

18. UNEP/GC.16/16.

19. *Ibid.*, section III.

20. *Ibid.*, Add.1.

21. UNEP/GC.16/15.

22. *Ibid.*, annex II.

23. The meeting took place in Halifax from 6-10 May 1991.

24. UNEP/GC.16/21/Add.5.

25. A/46/156-E/1991/54, transmitted to the Governing Council by a note of the Executive Director (UNEP/GC.16/18).

26. A/45.696/Add.1, annex III; the Conference took place in November 1990.

27. A/45/46, annex I.

28. UNEP/GC.16/20.

29. UNEP/GC.16/21 and Corr.1.

30. *Ibid.*, para. 14; the meeting took place in Paris from 3-5 December 1990.

31. UNEP/GC.16/21 and Corr.1, paras. 15-26.

32. UNEP/GC.16/15, as amended by the Council by paragraph 2 of its decision 16/23.

33. A/45/696/Add.1, annex II, section C, para. 11.

34. UNEP/GC.16/17, annex.

35. UNEP/GC.16/21 and Corr.1, paras. 1-8.

36. UNEP/OzL.Pro.2/3, annex I.

37. *Ibid.*, annex II.

38. UNEP/GC.16/21/Add.3, paras. 32-39.

39. UNEP/Bio.Div/WG.2/2/5, annex.

40. UNEP/GC.16/19.

41. UNEP/GC.16/Inf.4.

42. UNEP/GC.16/23/Add.1 and Corr.1.

43. UNEP/GC.16/22 and Corr.1 and Corr.2, part one.

44. *Ibid.*, part two; the Executive Director's revisions, made in view of recent developments, are contained in Add.1 of this document.

45. UNEP/GC.16/L.1 and Corr.1.

46. UNEP/GC.16/24.

47. *Ibid.*, Add 2.

48. A/46/583.

49. A/46/590.

50. The last report of UNSCEAR is contained in A/46/218.

51. A/46/215/Rev.1 - E/1991/76/Rev.1.

52. A/46/380 - E/1991/142.

53. A/46/157 - E/1991/55.

54. *Official Records of the Economic and Social Council, 1991*, Supplement No. 13 (E/1991/34), annex I.

55. *Official Records of the General Assembly*, Forty-sixth session, Supplement No. 48 (A/46/48), vol. II, annex I.

56. A/46/48 (Part II), annex I.

57. A/46/602.

58. See A/AC.237/9 and A/AC.237/12.

59. See A/Res. 45/212, para. 10.

60. *Ibid.*, para. 20.

61. A/Res. 45/210.

62. See S/22535.

63. A/46/25.

64. Budapest, 29 November - 6 December 1991.

65. A/C.2/46/12, annex and Add.1.

66. A/46/156 - E/1991/54.

67. A/46/214 - E/1991/52.

68. A/46/138 - E/1991/52.

69. A/46/615 and Add.1.

70. A/C.2/46/3.

CHAPTER V

FINANCIAL AND ADMINISTRATIVE AFFAIRS

Financial matters

The Environment Fund

Trust Funds

Counterpart contributions

Regular Budget of the United Nations

Personnel matters

Other administrative matters

FINANCIAL AND ADMINISTRATIVE MATTERS

I. FINANCIAL MATTERS

1. The resources available to UNEP for implementation of its activities come from four distinct sources: (i) the Environment Fund; (ii) trust funds; (iii) counterpart contributions; and, (iv) the regular budget of the United Nations. Table 1 shows the resources paid annually to UNEP since 1988.

2. Whereas UNEP income originates mainly from the four above-mentioned sources, expenditures are classified under five major headings: (i) Fund programme activities; (ii) programme and programme support costs; (iii) trust funds; (iv) counterpart contributions; and, (v) the regular budget of the United Nations. UNEP's annual expenditures since 1988, broken down according to those headings, are presented in Table 2.

3. Among the major trends illustrated in the two tables is the increasing importance of trust funds and counterpart contributions in the overall financing of UNEP activities and the constantly decreasing relative contribution of the regular budget of the United Nations.

A. The Environment Fund

1. Contributions

4. Table 1 in annex IV shows actual contributions paid by Governments into the Environment Fund during the biennia 1988-1989 and 1990-1991.

Table 1

United Nations Environment Programme: sources of funding, 1988-1991 (expressed in United States dollars and as a percentage of total funding)

Year	Environment Fund		Trust Funds		Counterpart contributions		Regular budget		Total
	$	%	$	%	$	%	$	%	$
1988	34 001 839	70.6	6 896 012	14.3	2 700 424	5.6	4 544 768	9.4	48 143 043
1989	38 582 969	67.6	8 720 779	15.3	4 156 678	7.3	5 625 126	9.9	57 085 552
1990	51 644 836	67.1	16 431 284[a]	21.0	5 345 925	6.8	4 683 833	6.0	78 105 878
1991	59 378 068	66.4	18 423 275[a]	20.6	5 490 934	6.1	6 158 485	6.9	89 450 762

Source: Financial Report and Accounts for the years in question.

[a] Excluding contributions to the Trust Fund for Interim Multilateral Fund for the Implementation of the Montreal Protocol, which amounted to $665,296 in 1990 and $27,005,926 in 1991.

Table 2

United Nations Environment Programme: expenditures, 1988-1991
(expressed in United States dollars and as a percentage of total expenditures)

Year	Fund programme		PPSC		Trust funds		Counterpart contributions		Regular budget		Total
	$	%	$	%	$	%	$	%	$	%	$
1988	21 934 776	44.9	11 236 020	23.0	8 444 700	17.3	2 696 244	5.5	4 544 768	9.3	48 856 508
1989	28 254 295	47.4	11 856 201	19.9	8 926 861	15.0	4 965 750	8.3	5 625 126	9.4	59 628 233
1990	28 867 732	45.1	13 090 863	20.5	13 176 614	20.6	4 148 966	6.5	4 683 833	7.3	63 968 008
1991	45 881 011	48.8	17 369 281	18.5	18 241 641[a]	19.4	6 277 151	6.7	6 158 485	6.6	93 927 569

Source: Financial Report and Accounts for years in question.

[a] Excluding expenditures from the Trust Fund for the Interim Multilateral Fund for the Implementation of the Montreal Protocol, which amounted to $3,972,456.

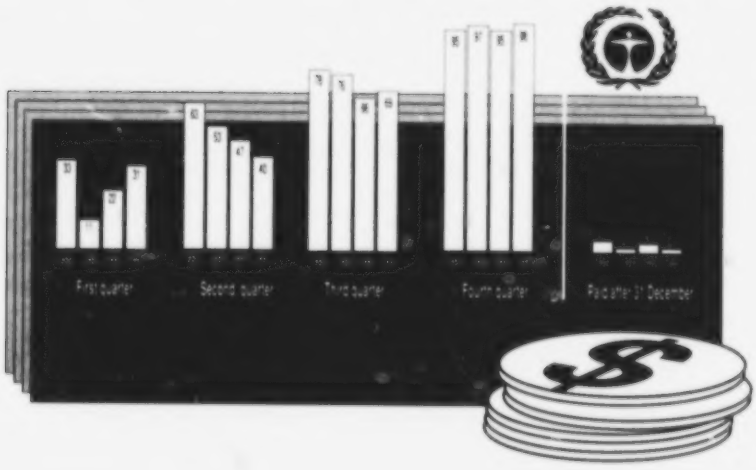
5. At its fifteenth session, in 1989, the Governing Council, by section V of its decision 15/1, agreed "to set a target of $100 million for contributions to the Environment Fund by the year 1992" and called upon "all Governments to increase their contributions to the Fund by at least 35 per cent per annum from the 1 January 1989 level to enable the target of $100 million to be met by 1992". Unless Governments increase their contributions to the Environment Fund in 1992 by more than 50 per cent of their 1991 levels, this target will not be reached.

6. In spite of the lower than expected level of contributions, the Executive Director recognizes that the biennium 1990-1991 witnessed the highest ever increase in contributions to the Fund, from $72.6 million in 1988-1989 to $111 million in 1990-1991, i.e., an increase of almost 53 per cent. Another encouraging sign is the fact that unpaid pledges at the end of 1991 show a decrease of almost two thirds from the 1989 level (from $1.9 million to $0.67 million). Of the total unpaid pledges for 1991 and prior years, 30 per cent are accounted for by one country alone and more than 75 per cent by three countries combined.

7. The timely payment of contributions is a basic factor for the Executive Director to be able to plan activities and projects financed from the Environment Fund. Figure 1 shows the pattern of payments, by quarter, in the last four years. In 1988 63 per cent of payments were made during the first half of the year, while only 40 per cent of 1991 payments were made during the corresponding period. This

Figure 1

Cumulative quarterly levels of payments to the Environment Fund, 1988-1991 (expressed as a percentage of total estimated contributions)



tendency prevents proper planning in the implementation of the programme.

2. *Expenditures for the implementation of the Environment Fund programme*

8. At its fifteenth session, the Governing Council, in its decision 15/46, approved an appropriation of $68 million for Fund programme activities and $4 million to the Fund programme reserve for the biennium 1990-1991. By section VI, paragraph 3, of decision 15/1, it also approved an additional appropriation of $35 million for a supplementary programme to be implemented by the Executive Director in consultation with the Committee of Permanent Representatives as and when additional resources became available. At its sixteenth session, by section II of its decision 16/23, the Council approved various adjustments to the supplementary programme proposed by the Executive Director and authorized him "to implement the adjusted programme during the remaining part of 1991 as and when resources become available".

9. Taking into account the supplementary programme and the adjustments approved by the Governing Council at its sixteenth session, the total appropriation and apportionment by subprogramme for the biennium 1990-1991 were as indicated in Table 2 of annex IV.

10. Based on a total appropriation of $107 million and the apportionments by subprogramme approved by the Governing Council, and taking into account the availability of resources in the Environment

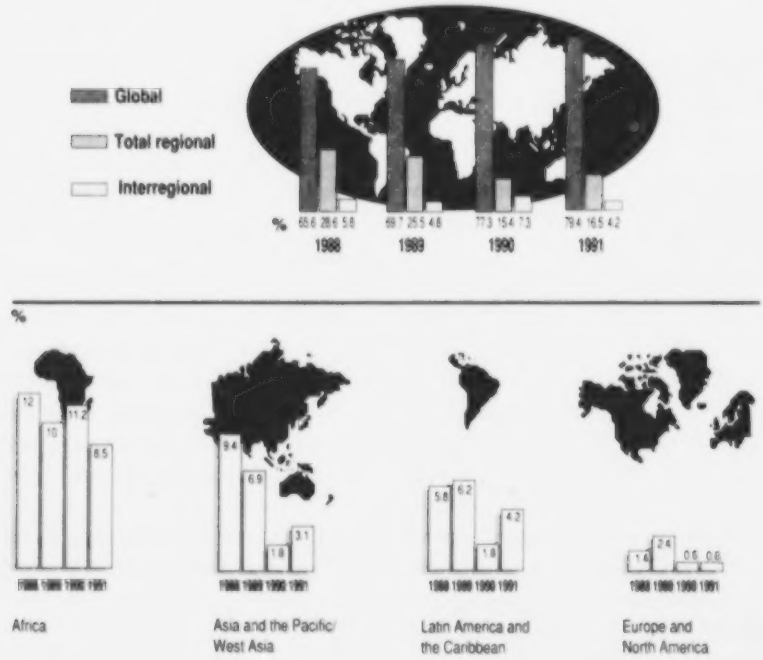
Fund, the Executive Director approved allocations totalling $91.71 million among the different subprogrammes and programme elements that constitute the environment programme. Table 2 of annex IV shows the commitments in approved projects and actual expenditures during the biennium 1990-1991.

11. The projects approved for the implementation of the 1990-1991 programme are presented in annex V, which should be read in conjunction with the 1990 and 1991 reports on new projects.

12. Although UNEP activities are mostly implemented at the global level, some activities are carried out in the regions, particularly those that have prepared regional environmental action plans. Figure 2 shows the distribution of Fund programme expenditures at the regional, interregional and global levels. In 1991, around 21 per cent

Figure 2

Environment Fund programme: geographical distribution of expenditures, 1988-1991 (expressed as a percentage of total expenditures)



of Environment Fund resources were applied at the regional or interregional level.

3. Programme and programme support costs budget (PPSC)

13. By section II of its resolution 2997 (XXVII) of 15 December 1972, on the environment secretariat, the General Assembly decided that "operational programme costs, and administrative costs of the Environment Fund shall be borne by the Fund". The PPSC budget covers some, but not all, of programme costs and some of the administrative costs of the Environment Fund programme.

14. At its fifteenth session, the Governing Council, by paragraph 4 of decision 15/45, approved an appropriation of $29,087 million for the PPSC budget for the biennium 1990-1991. It also approved, by its decision 15/1, section VI, paragraph 6, a supplementary appropriation for programme and programme support costs of $3.17 million to be used by the Executive Director during the biennium "only as and when he is in a position to fill some or all of the posts approved by the Council within the programme and programme support costs budget". Actual expenditures under this budget are shown in Table 3.

4. The outlook for 1992-1993

15. By the end of March 1992, 44 countries had made firm pledges totalling $38.24 million to the Environment Fund for 1992. Of these 44 countries, 22 pledged at a higher level than

Table 3

Programme and programme support costs budget, 1990-1991
(expressed in United States dollars)

	Approved appropriations	Expenditures	Balance
A. EXECUTIVE DIRECTION AND MANAGEMENT			
1. Office of the Executive Director	3 290 400	2 812 673	477 727
2. Regional representation	6 528 500	6 387 685	140 815
3. Management of the Environment Fund	2 540 600	2 164 965	375 635
B. ENVIRONMENT PROGRAMME	6 055 700	5 702 568	353 132
C. PROGRAMME SUPPORT			
1. Conference services	1 462 600	1 411 291	51 309
2. Administration and common services	12 379 200	11 980 962	398 238
TOTAL	32 257 000	30 460 144	1 796 856

they had done in 1991, 20 pledged at the same level and 2 pledged at a lower level.

16. By its decision 16/24, the Governing Council approved an appropriation of $150 million for Fund programme activities for the biennium 1992-1993 and an additional appropriation of $30 million, subject to availability of resources. Although the Executive Director believes that the expected contributions for 1992 and 1993 will allow the implementation of the $150 million programme approved by the Governing Council, he is exercising caution in the approval of projects. Table 3 of annex IV shows commitments approved as at 31 March 1992.

B. Trust funds

17. UNEP manages two broad types of trust funds: general trust funds and technical cooperation trust funds. During 1991, the total number of trust funds reached 44, with 14 being general trust funds, 29 technical cooperation trust funds and 1 special account for the Plan of Action to Combat Desertification, which is treated like a trust fund. Both types of trust fund are established under the procedures laid down by the United Nations and in accordance with Article V of the General Procedures Governing the Operation of the Fund of the United Nations Environment Programme.

18. Of these 44 trust funds, 6 were established in 1991 - 1 general trust fund and 5 technical cooperation trust funds. At the same time, following the Governing Council decision 15/23 B which recommended to the General Assembly the closure of the Special Account to finance the implementation of the Plan of Action to Combat Desertification and the subsequent General Assembly resolution 44/172 A, paragraph 8, by which the Assembly decided to close the Special Account and requested the Executive Director of UNEP to take the necessary steps to do so, all activities financed from this Account were concluded and the Account closed.

19. The trust funds are becoming an increasingly larger source of funding and their total resource magnitude has nearly reached that of the Environment Fund. The income from the trust funds during 1991 amounted to $46,790,581, including $27,546,540 for the Trust Fund for the Interim Multilateral Fund for the Implementation of the Montreal Protocol. Pledges during the period amounted to $75,719,546, of which $53,000,000 were for the Interim Multilateral Fund. The contributions paid to all trust funds for the year amounted to $44,977,813. Cumulative outstanding contributions as at the end of the year amounted to $41,385,120, an indication of the underlying problem of non-payment which seriously affects the achievement of the planned programme of activities and which UNEP has continuously pointed out to the parties concerned.

20. Annex III contains a short description of action taken regarding each trust fund during 1991 followed by a table indicating their financial status for the year.

C. Counterpart contributions

21. Counterpart contributions are donations made by Governments, cooperating agencies or supporting organizations, in cash or in kind, to cover the cost of specific services and facilities for specific projects. These contributions are accepted in accordance with

financial rule 204.1 of the Fund. As can be seen from table 1, counterpart contributions totalled $5.5 million in the year under review. The Executive Director considers that contributions of this type are of great help in the implementation of the programme, but would still stress the fact that the administration and separate reporting of a large number of small contributions constitute a burden to the secretariat.

D. Regular budget of the United Nations

22. By section II of its resolution 2997 (XXVII), the General Assembly decided that "a small secretariat shall be established in the United Nations to serve as a focal point for environmental action and coordination within the United Nations system in such a way as to ensure a high degree of effective management", and that the costs of servicing the Governing Council and providing the small secretariat "shall be borne by the regular budget of the United Nations". The participation of the regular budget in financing UNEP has become practically stagnant in absolute terms since 1980 and has increasingly lost its relative importance to reach, in 1991, only 6 per cent of the total cost of UNEP's activities.

II. PERSONNEL MATTERS

23. The secretariat of UNEP comprises staff members in the Professional and higher categories and those in the General Service category, occupying posts which are funded from different sources: the regular budget of the United Nations; the Environment Fund through the programme and programme support costs budget, the programme activity centres or projects; trust funds through projects or as Junior or Senior Professional Officers; counterpart contributions provided by Governments or organizations in accordance with financial rule 204.1 of the Fund, and a special account for support to trust funds.

24. Table 4 provides information regarding approved and occupied posts in respect of the Professional and higher categories, broken down by source of funding. Table 5 provides similar information in respect of the General Service category. Table 6 shows the distribution of Professional and higher-level staff by function and source of funding.

25. In the year under review, UNEP witnessed a significant increase both in the number of posts and in the number of staff on board. There were 770 approved posts in UNEP's secretariat as at 31 December 1991 as compared to 710 on 31 December 1990. The number of staff on board as at 31 December 1991 amounted to 691, compared to 614 as at 31 December 1990. As may be seen from tables 4 and 5, the Environment Fund continues to be the main source of funding for posts in UNEP.

26. Five posts (three Professional and two General Service) were added under programme activity centres, thirty-two (eight Professional and twenty-four General Service) under projects funded from the Environment Fund, thirty-four (nine Professional and twenty-five General Service) under trust funds, and five General Service under the special account for support of trust funds.

27. These increases were offset by reductions in the number of Junior Professional Officer posts (11), Senior Professional Officer posts (2) and posts funded from counterpart

Table 4

Source of financing for Professional and higher posts

	Number of posts			
	31 December 1990		31 December 1991	
	Approved	Occupied	Approved	Occupied
Environment Fund:				
(a) PPSC	92	71	92	77
(b) Projects:				
(i) PACs	37	25	40	32
(ii) Others	58	43	66	58
Subtotal	**187**	**139**	**198**	**167**
Regular budget	38	32	38	29
Trust fund projects	20	15	29	22
JPO agreements (trust funds)	24	24	13	13
Senior Professional Officers financed by Governments	6	6	4	4
Special account for support to trust funds (SASTF)	10	8	10	9
Activities financed from counterpart contributions	6	6	11	8
GRAND TOTAL	291	230	303	252

Table 5

Source of financing for General Service posts

	Number of posts			
	31 December 1990		31 December 1991	
	Approved	Occupied	Approved	Occupied
Environment Fund:				
(a) PPSC	199	188	199	192
(b) Projects:				
(i) PACs	49	43	51	50
(ii) Others	68	56	92	82
Subtotal	**316**	**287**	**342**	**324**
Regular budget	49	46	49	49
Trust fund projects	15	14	40	32
Special account for support to trust funds	28	26	33	32
Activities financed from counterpart contributions	11	11	3	2
GRAND TOTAL	419	384	467	439

contributions (3). The number of posts funded from the regular budget of the United Nations and from the programme and programme support costs budget remained unchanged.

28. The reduction in the number of Junior Professional Officers was anticipated in last years' Annual Report following the introduction of a new policy whereby participating Governments would be urged to finance one developing country national for every two of their own nationals. The increase under trust funds results essentially from the establishment of the Secretariat for the Interim Multilateral Fund for the implementation of the Montreal Protocol and the establishment of the Information Unit on Climate Change.

29. The increase in the number of occupied posts in the Professional category resulted from the arrival of 46 new staff members offset by the departure of 24 staff members.

30. As at the end of 1992, there were 252 Professional and higher-level posts occupied by nationals of 76 countries. This compares to 230 posts occupied by nationals of 71 countries at the end of 1990. The Executive Director continued his efforts to ensure an equitable geographical distribution among staff in the Professional and higher categories, with particular emphasis on the maintenance of a balance between the number of staff from developing and developed countries.

31. The distribution of staff in the Professional and higher categories

Table 6

Distribution of Professional and higher-level staff by function and source of funding (as at 31 December 1991)

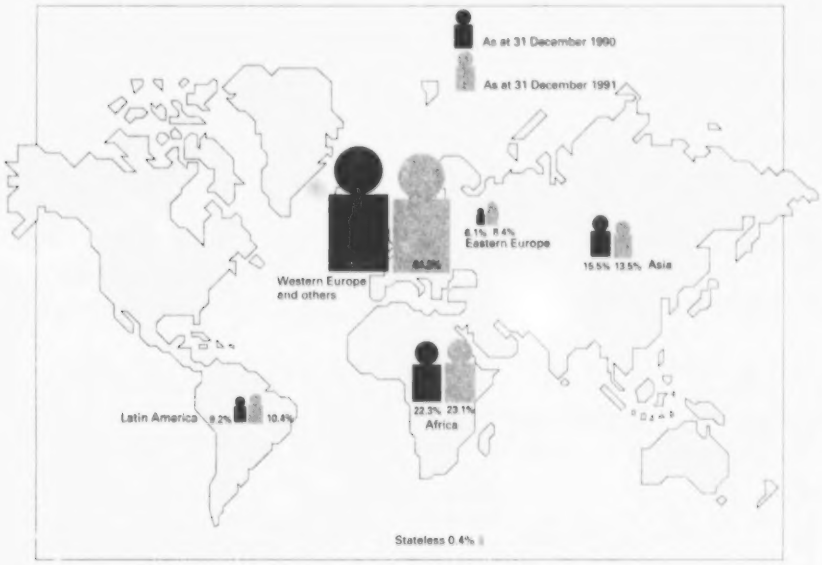
	Regular budget	PPSC budget	JPO trust funds	SPO trust funds	SASTF	Environment Fund projects	Trust fund projects	Activities financed from counterpart projects	Total
1. Senior management	3	1	-	-	-	-	-	-	4
2. Regional offices and external relations	5	10	1	-	-	8	-	-	23
3. Development of programmes	7	22	9	4	3	22	12	4	83
4. Projects: - PACs	-	3	3	-	-	18	-	-	25
5. Projects - others	1	-	-	-	-	10	9	3	23
6. Fund management and clearing-house	-	13	-	-	3	2	-	-	18
7. Information	2	6	-	-	-	11	-	-	19
8. Conferences and Governing Council Service	6	7	-	-	-	16	-	-	29
9. Administration	5	14	-	-	3	3	1	1	27
10. Post on loan to UNCHS	-	1	-	-	-	-	-	-	
Total	29	77	13	4	9	90	22	8	252

according to region, nationality and level as at 31 December 1991 may be found in Annex II. The percentage distribution of staff among regions is summarized in Figure 3.

of UNEP work at the headquarters of UNEP in Nairobi. UNEP also maintains offices in a number of other cities. The distribution of staff on board as at 31 December 1991 by duty station is presented in Table 8.

Figure 3

Percentage distribution of Professional staff by region, 1990 and 1991



32. Of the Professional and higher category staff members on board as at 31 December 1991, 23.8 per cent were women (60 out of 252). The lack of career opportunities for spouses of UNEP staff members in Kenya has continued to hamper the efforts deployed by the Executive Director to ensure an increase in the number of women in the Professional category, particularly at the senior level. The numbers of women and men in the Professional category and above as at 31 December 1991, broken down by grade, are indicated in Table 7.

33. The overwhelming majority of the staff

Table 7

Numbers of men and women in the Professional and higher categories (as at 31 December 1991)

Level	Men		Women	
USG	1	(100%)		
ASG	3	(100%)		
D-2	12	(100%)	-	
D-1	24	(89%)	3	(11%)
P-5	37	(86%)	6	(14%)
P-4	44	(79%)	12	(21%)
P-3	42	(67%)	21	(33%)
P-2	27	(61%)	17	(39%)
P-1	2	(67%)	1	(33%)
Total	192	(76%)	60	(24%)

Table 8

Distribution of UNEP staff members by duty station (as at 31 December 1991)

Duty station	Professionals	General Service	Total
Athens	6	13	19
Bangkok	4	7	11
Bonn	1	2	3
Cairo	1	1	2
Geneva	24	19	43
Kingston	4	6	10
Lausanne	9	9	18
London	1	-	1
Manama	2	5	7
Montreal	5	4	9
Munich	1	-	1
Mexico City	4	5	9
Nairobi	176	349	525
New York	3	8	11
Paris	7	8	15
Sioux Falls	1	-	1
Washington	1	1	2
Vienna	1	2	3
Total	252	439	691

III. OTHER ADMINISTRATIVE MATTERS

The study of the management and organization of UNEP

34. By its decision 16/6, the Governing Council invited the Executive Director to engage, after tender and in consultation with the Committee of Permanent Representatives, an internationally recognized consultancy firm to assess the management and organization of UNEP and to make the results available to Governments before 1 February 1992. At the same time, by paragraph 3 of the same decision, the Governing Council decided that the Executive Director should commission a second-phase study in the light of the conclusion of the United Nations Conference on Environment and Development which would advise on the future management and organization of UNEP for submission to the Governing Council at its seventeenth session.

35. After consultation with the Committee of Permanent Representatives on the terms of reference for the first study, Governments were invited informally to propose names of internationally recognized consultancy firms which were added to lists of firms drawn up by UNEP and the full list were asked if they wished to tender for the contract. On the basis of the responses to that enquiry, a short list of firms was drawn up and invited to tender. In

accordance with normal United Nations contracting procedures one firm was selected and the report on the first phase was received at the end of 1991 for submission to Governments within the deadline. The second phase of the study is, of course, still awaited.

Annexes

Annex I **Member States of the UNEP Governing Council**

Annex II **Distribution of UNEP staff in the Professional Category and Above by Region, Nationality and Level as at 31 December 1991**

Annex III **Trust Funds and other Funds**

1. Status and actions taken in 1991

2. Financial status of Trust Funds and other Funds as at 31 December 1991

Annex IV **Environment Fund Tables**

Annex V **Implementation of UNEP Programme 1990-1991**

Annex I

MEMBER STATES OF THE GOVERNING COUNCIL OF THE UNITED NATIONS ENVIRONMENT PROGRAMME

By alphabetical order (indicating terms of office)

Argentina**
Austria**
Bangladesh*
Barbados**
Botswana*
Brazil**
Bulgaria*
Burundi**
Canada*
Chile*
Colombia*
Costa Rica*
Côte D'Ivoire*
Czech and Slovak Federal Republic*
Finland*
France**
Gabon**
Gambia**
Germany**
Guyana*
India*
Indonesia**
Japan**
Jordan*
Kenya*
Kuwait**
Lesotho**
Libyan Arab Jamahiriya*
Malta*
Mauritius**
Mexico*
Netherlands*
New Zealand**
Norway**
Oman*
Pakistan*
Peru**
Philippines**
Poland*
Rwanda*
Saudi Arabia*
Spain**
Sri Lanka*
Sudan*
Thailand*
Togo*
Tunisia**
Turkey*
Uganda*
Ukraine**
Russian Federation**
United Kingdom of Great Britain and Northern Ireland*
United States of America**
Venezuela**
Yugoslavia**
Zaire**
Zimbabwe**

* *Term expires on 31 December 1991.*

** *Term expires on 31 December 1993.*

Annex II

DISTRIBUTION OF UNEP STAFF IN THE PROFESSIONAL CATEGORY AND ABOVE BY REGION, NATIONALITY AND LEVEL AS AT 31 DECEMBER 1991[a]

Region and country of nationality	Occupied posts subject to geographical distribution	Number	Occupied posts not subject to geographical distribution[b]	Number	Total
African States					
ALGERIA	-	-	1 P-2	1	1
BURKINA FASO	-	-	1 P4	1	1
CONGO	-	-	1 P-3	1	1
EGYPT	1 USG, 1 P-5, 1 P-4, 1 P-3	4	1 D-2, 3 P-5,	4	8
ETHIOPIA	-	-	1 D-1, 1 P-3, 4 P-2	6	6
GAMBIA	-	-	1 P-5, 1 P-4	2	2
GHANA	-	-	1 P-4, 2 P-2	3	3
KENYA	1 D-2, 1 P-4, 5 P-3, 1 P-1	8	1 D-1, 1 P-4	2	10
LIBYAN ARAB JAMAHIRIYA	-	-	1 P-5, 1 P-3	2	2
MALI	-	-	1 P-2	1	1
MAURITIUS	1 D-1	1	1 P-5	1	2
MOROCCO	1 P-4	1	1 P-2	1	2
NIGERIA	-	-	2 P-3, 1 P-2	3	3
SAO TOME AND PRINCIPE	-	-	1 D-1	1	1
SIERRA LEONE	-	-	2 P-3	2	2
SOMALIA	-	-	1 D-1	1	1
SUDAN	1 D-2, 1 P-2	2	1 P-5, 1 P-3	2	4
UGANDA	1 P-4	1	1 P-5	1	2
UNITED REPUBLIC OF TANZANIA	-	-	2 P-3	2	2
ZAIRE	1 P-5	1	-	-	1
ZAMBIA	-	-	1 P-3	1	1
ZIMBABWE	-	-	1 P-4, 1 P-3	2	2
SUBTOTAL		**18**		**40**	**58**

[a] The breakdown by region and country in the present annex corresponds to the distribution of membership in the Governing Council among the five regions listed in General Assembly resolution 2997 (XXVII).

[b] Including staff on fund posts and all language staff.

Region and country of nationality	Occupied posts subject to geographical distribution	Number	Occupied posts not subject to geographical distribution[b]	Number	Total
Asian States					
AFGHANISTAN	1 P-5	1	-	-	1
BANGLADESH	-	-	1 P-4	1	1
CHINA	1 P-2	1	1 D-2, 2 P-4, 1 P-3	4	5
INDIA	-	-	1 D-1, 1 P-5, 1 P-4, 1 P-3, 1 P-2	5	5
IRAN (ISLAMIC REPUBLIC OF)	-	-	1 P-5, 1 P-2	2	2
IRAQ	-	-	1 P-5	1	1
JAPAN	2 P-2	2	1 D-1, 1 P-5, 1 P-3	3	5
LEBANON	-	-	1 P-3	1	1
MALAYSIA	-	-	1 D-1, 2 P-4	3	3
NEPAL	-	-	1 P-2	1	1
PHILIPPINES	-	-	1 P-5	1	
SINGAPORE	1 P-4	1	-	-	1
SRI LANKA	-	-	1 P-4, 2 P-3	3	3
TURKEY	-	-	1 P-4, 1 P-3	2	2
VIET NAM	-	-	1 P-2	1	1
YEMEN	-	-	1 D-1	1	1
SUBTOTAL		5		29	34
Eastern European States					
BULGARIA	-	-	1 D-1	1	1
CZECH AND SLOVAK FEDERAL REPUBLIC	-	-	1 P-5	1	1
POLAND	-	-	1 P-5, 1 P-3	2	2
USSR	1 ASG, 1 P-4,	2	1 D-2, 4 P-5, 7 P-4 1 P-3, 1 P-2	14	16
YUGOSLAVIA	-	-	1 D-1	1	1
SUBTOTAL		2		19	21

Region and country of nationality	Occupied posts subject to geographical distribution	Number	Occupied posts not subject to geographical distribution[b]	Number	Total
Western European and other States					
AUSTRALIA	-	-	1 P-5, 1 P-3	2	2
AUSTRIA	-	-	1 P-5, 1 P-4, 3 P-2	5	5
BELGIUM	-	-	2 P-4, 1 P-3	3	3
CANADA	-	-	1 P-3, 1 P-2, 1 P-1	3	3
DENMARK	1 P-5	1	1 P-5, 2 P-3	3	4
FINLAND	-	-	1 D-1, 2 P-5	5	5
FRANCE	1 P-5, 1 P-4, 1 P-2, 2 P-3, 2 P-2	7	1 D-1, 1 P-4	2	9
GERMANY	-	-	1 D-1, 2 P-5, 2 P-4, 2 P-2, 1 P-1	8	8
GREECE	1 P-5	1	-	-	1
ICELAND	-	-	1 P-4	1	1
IRELAND	-	-	3 P-3	3	3
ITALY	-	-	1 P-5, 1 P-4, 1 P-3, 2 P-2	5	5
MALTA	-	-	1 D-2	1	1
NETHERLANDS	-	-	1 D-2, 1 D-1, 1 P-4, 1 P-3, 3 P-2	7	7
NEW ZEALAND	-	-	2 D-1, 2 P-3, 1 P-2	5	5
NORWAY	1 P-4	1	1 P-5, 1 P-2	2	3
SPAIN	1 P-4	1	1 P-4, 1 P-3, 2 P-2	4	5
SWEDEN	-	-	2 P-5, 2 P-3, 3 P-2	7	7
SWITZERLAND	-	-	1 D-1, 1 P-5, 1 P-4, 1 P-3	4	4
UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	-	-	1 ASG, 1 D-2, 1 P-5, 2 P-4, 3 P-3, 2 P-1	10	10
UNITED STATES OF AMERICA	1 ASG, 2 D-1, 1 P-2	4	5 D-1, 1 P-5, 4 P-4, 4 P-3, 1 P-2, 1 P-1	16	20
SUBTOTAL		15		96	111

Region and country of nationality	Occupied posts subject to geographical distribution	Number	Occupied posts not subject to geographical distribution[b]	Number	Tota
Latin American States					
ARGENTINA	-	-	3 P-4, 1 P-2	4	4
BRAZIL	-	-	1 P-3	1	1
COLOMBIA	-	-	2 P-3, 1 P-2	3	3
ECUADOR	-	-	1 P-2	1	1
GUYANA	-	-	1 P-5	1	1
HAITI	-	-	1 P-3	1	1
JAMAICA	1 D-2	1	1 P-5, 2 P-3, 1 P-2	4	5
MEXICO	-	-	2 P-5, 1 P-3, 2 P-2	5	5
PANAMA	-	-	1 D-1	1	1
PERU	-	-	1 D-2, 2 P-4	3	3
VENEZUELA	-		1 P-5	1	1
SUBTOTAL		**1**		**25**	**26**
STATELESS	-	-	1 P-2	1	1
TOTAL		**41**		**209**	**250**

Annex III

TRUST FUNDS AND OTHER FUNDS

1. Status and actions taken in 1991

A. General trust funds

	Name of Trust Fund	Date established	Expiry date	Action taken in 1991
1.	Regional Trust Fund for the Implementation of the Action Plan for the Caribbean Environment Programme	1991	31 December 1993	The following five regional programmes were continued during 1991: (1) specially protected areas and wildlife; (2) assessment and control of marine pollution; (3) integrated planning and institutional development; (4) information systems for the management of marine and coastal areas; and (5) education, training and public awareness. A second protocol, concerning specially protected areas and wildlife (SPAW), was added to the Convention for the Protection and Development of the Marine Environment in the Wider Caribbean (Cartagena Convention) and the Regional Coordinating Unit also undertook preliminary activities leading to the development of a protocol on land-based sources of pollution. As at 31 December 1991, 18 States had acceded to the Cartagena Convention and 18 had ratified the Protocol Concerning Cooperation in Combating Oil Spills in the Wider Caribbean Region. Additionally, 14 Contracting Parties had ratified the SPAW Protocol.
2.	Trust Fund for the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)	1979	31 December 1993	The Trust Fund continued to support the CITES Secretariat activities in the enforcement and implementation of the Convention. The Convention had 112 Contracting Parties as at 31 December 1991.
3.	Regional Seas Trust Fund for the Eastern African Region	1986	31 December 1993	The Second Meeting of the Action Plan for the Eastern African Region was held in November 1991 at which it was decided that activities for the protection and management of marine and coastal areas and studies on the assessment and control of pollution in the coastal and marine environment be given priority for financing from the trust fund.

Name of Trust Fund	Date established	Expiry date	Action taken in 1991
			As at 31 December 1991, nine countries were participating in the Action Plan and had pledged contributions to the trust fund. An extension of the trust fund to 31 December 1993 was approved by the Governing Council at its sixteenth session and was confirmed by the second meeting of the Bureau of the Action Plan for the East African Region.
4. Regional Trust Fund for the Implementation and Development of the Marine Environment and Coastal Areas of the East Asia Seas	1981	31 December 1993	As at 31 December 1991, five countries were participating in the Action Plan and the trust fund. The extension of the trust fund's expiry date to 31 December 1993 was approved by the Governing Council at its sixteenth session, and was confirmed by the Ninth Meeting of the Coordinating Body on the Seas of East Asia (COBSEA).
5. Trust Fund for the Environmental Training Network in Latin America and the Caribbean	1989	31 December 1993	The Trust Fund continued to support the Regional Office for Latin America and the Caribbean in the coordination of the Environmental Training Network in Latin America and the Caribbean during 1991. There are currently 19 countries participating in the Network.
6. Regional Trust Fund for the Protection and Development of the Marine Environment and Coastal Areas of Bahrain, Iraq, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates	1978	30 June 1993	During 1991 the activities of the Kuwait Action Plan focused on dealing with the environmental consequences of the armed conflict in the region although assistance was provided mainly under the United Nations Inter-agency Plan of Action for the ROPME Region and was financed under a trust fund set up for this purpose (see section 29 below). As at 31 December 1991, eight countries had acceded to the Kuwait Regional Convention for Cooperation on the Protection of the Marine Environment from Pollution, and eight States had signed the Protocol concerning Regional Cooperation in Combating Pollution by Oil and Other Harmful Substances in Cases of Emergency. At its sixteenth session, the Governing Council approved the extension of the Trust Fund's expiry date to 30 June 1993, subject to confirmation by ROPME.
7. Trust fund for the Protection of the Mediterranean Sea Against Pollution	1979	31 December 1993	During 1991 the Trust Fund continued to finance the following activities: (1) monitoring and research of pollution in the Mediterranean and development of common measures for protection against pollution (MEDPOL);

Name of Trust Fund	Date established	Expiry date	Action taken in 1991
			(2) actions for the environmentally sound management of the Mediterranean coastal zone, which includes the Coastal Areas Management Plan (CAMP) and the Priority Actions Programme (PAP) and the Blue Plan; (3) actions in the framework of the Regional Marine Pollution Emergency Response Centre (REMPEC) and the Specially Protected Areas Regional Activity Centre (SPA/RAC); and (4) actions for the implementation of the Barcelona Convention and its related protocols and the preparation of the protocol for the protection of the Mediterranean Sea against pollution resulting from the exploration and exploitation of the continental shelf and the sea-bed and its subsoil. As at 31 December 1991, the Convention for the Protection of the Mediterranean Sea against Pollution and its two related protocols had been ratified by 18 Mediterranean States and EEC and the other two Protocols by 16 States and EEC. All these parties contributed to the Trust Fund. An extension of the Trust Fund through 31 December 1993 approved by the Governing Council at its sixteenth session was confirmed by the Seventh Ordinary Meeting of the Contracting Parties to the Convention for the Protection of the Mediterranean Sea Against Pollution and its related Protocols, held in Cairo in October 1991.
8. Trust Fund for the Interim Multilateral Fund for the Implementation of the Montreal Protocol	1991	31 December 1993	The Trust Fund was established in 1991 following the decision of the Second Meeting of the Parties to the Montreal Protocol to create a financial mechanism to assist developing countries Parties to comply with the Protocol. The Executive Committee of the Interim Multilateral Fund has been established to assist the secretariat of the Fund in its management of funds. A secretariat for the Interim Fund has also been established and is based in Montreal, Canada. Various United Nations agencies are invited by the Executive Committee to cooperate and assist the Parties within their respective areas of expertise in the country programmes to facilitate compliance with the Protocol.

	Name of Trust Fund	Date established	Expiry date	Action taken in 1991
9.	Trust Fund for the Montreal Protocol on Substances that Deplete the Ozone Layer	1989	31 December 1995	The Trust Fund's activities during the year involved supporting the Ozone Secretariat, financing the initial and subsequent updating of the assessment panels' investigations, their publication and dissemination. The Third Meeting of the Parties was held in June 1991 in Nairobi and the Trust Fund's expiry date was extended to 31 December 1995. As at 31 December 1991, there were 71 Contracting Parties (including EEC) to the Protocol.
10.	Trust Fund for the Convention on the Conservation of Migratory Species of Wild Animals (CMS)	1986	31 December 1993	The Conference of the Parties adopted the amendment to the CMS appendices and resolutions aimed at improving implementation of the Convention. Regional conservation agreements were concluded for European bats and North and Baltic Sea small cetaceans. As at 31 December 1991, there were 38 Contracting Parties to the Convention.
11.	Trust Fund for the Purpose of Financing the New International Environment Prize	1982	No fixed date	The annual international environmental prize worth $200,000 was in 1991 awarded to Mr. and Mrs. Wolfgang and Francoise Burhene, environmental law experts from Germany.
12.	United Nations Trust Fund for the Environment Stamp Conservation Fund	1984	No fixed date	During 1991 the Trust Fund financed the implementation of the Regional Programme on Protection and Conservation of Natural and Cultural Heritage and of Protected Areas which is one of the eight ongoing priority regional programmes of the Latin America and the Caribbean Environmental Action Plan. Although there is no fixed expiry date, UNEP will close the Trust Fund as there are no more resources to replenish it.
13.	Trust Fund for the Vienna Convention for the Protection of the Ozone Layer	1990	31 March 1995	The Trust Fund's activities during the year have involved supporting the Ozone Secretariat in the implementation and enforcement of the Convention. The Second Meeting of the Parties was held in June 1991 in Nairobi and the Trust Fund's expiry date has been extended to 31 March 1995.

	Name of Trust Fund	Date established	Expiry date	Action taken in 1991
				As at 31 December 1991, there were 80 Contracting Parties (including EEC) to the Convention.
14.	Trust Fund for the Protection and Development of the Marine Environment and Coastal Areas of the West and Central African Region	1986	31 December 1993	As at the end of 1991, 10 States were parties to the Convention for Cooperation on the Protection and Development of the Marine and Coastal Environment of the West and Central African region and its associated Protocol concerning Cooperation in Combating Pollution in case of emergency. Support to the consolidation of the regional pollution monitoring research and control programme in cooperation with FAO continued during the year. Activities included the identification of critical habitats for the sustainability of the marine and coastal ecosystems in West Africa. A pilot project on coastal erosion control in Benin was co-financed by UNEP and the OAU. The extension of the Trust Fund's expiry date to 31 December 1993 was approved by the Governing Council at its sixteenth session subject to confirmation by the Governments concerned at the Seventh Meeting of the Steering Committee.
	B. Technical cooperation trust funds			
15.	Technical Cooperation Trust Fund to Provide Consultancies to Developing Countries, financed by the Government of Finland	1986	31 December 1992	During 1991 activities included: (a) preparation of a workshop on promotion of water quality in Africa; (b) advisory services on the formulation of national soils and policies; (c) training seminars in soil and water conservation management for the West African Region; (d) conservation of biological diversity and protected areas; (e) promotion of cleaner production; (f) training workshop on hazardous industrial waste management; (g) assessment of biological diversity and microclimate of tropical forest canopy in Panama; and, (h) training course on environmental management for industrial managers and engineers. At the end of 1991 a contribution was received for the following activities: (a) promotion of water quality in Africa; (b) follow-up on environmental management activities in African Lusophone countries and

	Name of Trust Fund	Date established	Expiry date	Action taken in 1991
				Equatorial Guinea; (c) technical cooperation to assess environmental problems and to strengthen environment-related policies, legislation, planning and institutions in developing countries; (d) activities for formulating a National Environmental Strategy in Viet Nam; (e) assessment of soil degradation and digitizing soil and terrain databases in a pilot area in East Africa; and (f) West Asia regional workshop on safe landfill of hazardous industrial waste.
16.	Technical Cooperation Trust Fund for the Financing of Professional Officers, financed by the Government of Finland	1986	No fixed date	During 1991 one Professional officer and one Junior Professional Officer were supported by this Trust Fund which supports all personnel (both Professionals and Junior Professional Officers) financed by the Government of Finland. The Trust Fund has no fixed expiry date.
17.	Technical Cooperation Trust Fund to Support the Clearing-House Mechanism through Provision of Consultancies on Strategies for Dealing with Serious Environment Problems, financed by the Government of Norway	1985	31 December 1991	During 1991 an ecological survey continued in three project villages and one stock-raising zone in Uganda. The Trust Fund had been extended through 31 December 1991 and needs to be extended further to allow for the finalization of activities.
18.	Technical Cooperation Trust Fund for Control of Environmental Health Hazards and Promotion of Chemical Safety, financed by the Government of Germany	1985	31 December 1989	During 1991, no activities were funded by this Trust Fund, but the balance of remaining funds was projected to hold a workshop in West Asia in 1992. The trust fund needs to be extended further to allow for finalization of the above programmed activity.
19.	Technical Cooperation Trust Fund for Activities in Developing Countries on Environmental Awareness and	1988	31 December 1993	During 1991 activities continued to focus on strengthening the capabilities of developing countries to design and implement policies and plans that reconcile socio-economic development objectives with the main objective of sound management of their natural resources and environment.

	Name of Trust Fund	Date established	Expiry date	Action taken in 1991
	Machinery, financed by the Government of Germany			Activities were undertaken in Egypt in the preparation of the Environment Management Action Plan (EMAP), while in Guinea Conakry UNEP assisted in the preparation of the National Plan of Action for Environment. In Guyana, UNEP provided assistance in institutional capacity-building, environmental impact assessment and rehabilitation of urban drainage. In Mozambique, UNEP provided support to a National Environmental Management Programme (NEMP) and in Rwanda to the formulation of National Strategy and Action Plan and preparation of a draft environmental law text. Finally, in Viet Nam UNEP provided assistance in preparation of a series of policy papers, including a national conservation strategy and a national environmental action plan.
20.	Technical Cooperation Trust Fund to Provide Experts to the UNEP Ozone Secretariat, financed by the Government of the United States of America	1989	31 December 1990	The expert completed his assignment in assisting the Interim Ozone Secretariat to coordinate the activities of the Vienna Convention for the Protection of the Ozone Layer and its Montreal Protocol on Substances that Deplete the Ozone Layer. During 1991, the Ozone Secretariat completed recruiting the basic Professional and supporting staff required. Activities under the Trust Fund have ceased, although its accounts are awaiting finalization.
21.	Technical Cooperation Trust Fund for the Provision of a Forestry Officer, financed by the Government of the United States of America	1990	30 June 1991	The Forestry Officer responsible for organizing, planning and conducting the activities related to the UNEP's collaboration on the Tropical Forests Action Plan completed his assignment during 1991. Activities under the Trust Fund have ceased, although its accounts are awaiting finalization.
22.	Technical Cooperation Trust Fund for the Establishment of a GRID Centre in Arendal, Norway	1989	31 December 1992	The Trust Fund continued to support the GRID Arendal Centre's coordination by Norway and other Nordic countries in dealing with environmental information, resource management, digital mapping, telecommunications technology and the training of personnel from developing countries in GIS techniques.

	Name of Trust Fund	Date established	Expiry date	Action taken in 1991
23.	Technical Cooperation Trust Fund for UNEP's Implementation of the Activities Funded by the Global Environment Facility	1991	31 December 1994	This Trust Fund was established in 1991 with the aim of supporting Global Environment Facility (GEF) activities implemented by UNEP, including review of project for GEF funding and establishment of and administrative support to the Scientific and Technical Advisory Panel (STAP). The fund has so far been utilized largely for personnel and administration costs, among them the convening of STAP meetings. The current expiry date of this trust fund is 31 December 1994.
24.	Technical Cooperation Trust Fund to Provide Experts to the UNEP Global Resource Information Database (GRID), financed by the Government of Denmark	1987	31 December 1992	The Trust Fund is now funded solely by Denmark to provide experts to the UNEP/GRID Centre and during 1991 there was one such expert supported.
25.	Technical Cooperation Trust Fund for UNEP's Implementation of the Activities Funded by the Interim Multilateral Fund Established under the Montreal Protocol	1991	31 December 1993	This Trust Fund was established in 1991 to fund the activities which the Executive Committee of the Interim Multilateral Fund had requested UNEP to undertake. UNEP's activities cover the promotion of the Protocol's objectives, research and data gathering and Clearing-house functions. The UNEP IE/PAC is charged with carrying out the activities on UNEP's behalf.
26.	Technical Cooperation Trust Fund to Assist Implementation of the Montreal Protocol on the Substances that Deplete the Ozone Layer in Developing Countries, initially in South-East Asia, financed by SIDA	1990	31 December 1992	The Trust Fund continued to support the studies on the present and projected consumption of CFCs and halons and making recommendations for adapting new technologies and substitutes and conducting training courses for experts from South East Asian developing countries on such technologies.
27.	INFOTERRA Technical Cooperation Trust Fund, financed by the Government of the United States of America	1990	31 December 1993	This Trust Fund was used for equipment procurement, training and support of Botswana's national focal point as part of INFOTERRA's network of national focal points.
28.	Technical Cooperation Trust Fund for the Establishment of	1991	31 December 1993	This Trust Fund was established during 1991 and its objectives are the eventual establishment of a centre dedicated to the transfer of

	Name of Trust Fund	Date established	Expiry date	Action taken in 1991
	the International Environmental Technology Centre in Japan			environmentally sound technologies to developing countries. No activities took place during 1991 because the Trust Fund was established at the end of the year.
29.	Technical Cooperation Trust Fund to Develop and Coordinate the Implementation of the Plan for the Survey, Assessment and Dealing with the Consequences of Environmental Damage Caused by Conflict Between Kuwait and Iraq	1991	31 December 1992	This Trust Fund was established in 1991 to redress the disruption of social and economic structures and the destruction of the environment resulting from the conflict between Iraq and Kuwait. UNEP had spearheaded the inter-agency consultations which resulted in the formulation of a framework of an action plan with ROPME member States undertaking the main responsibility of mitigating or eliminating the consequences of environmental damage caused by conflict in the region. Various United Nations and other agencies have participated in the various investigative activities which are culminating in a programme for implementation. The main activities undertaken include: (a) multi-disciplinary team surveys to provide, analyse, evaluate data and establish a computerized data-base required for the assessment of war-related environmental damage; (b) formulation of a detailed plan of operation based on the assessment of damage, for the mitigation, elimination, rehabilitation and environmental protection of the area; and (c) coordination of actions by the United Nations system or other organizations or Governments within the region or outside the region to implement the plan of operation. The Trust Fund will also support further development of a consolidated rehabilitation programme for the region to be implemented by ROPME in cooperation with UNEP as decided by the UNEP Governing Council at its third special session.
30.	Technical Assistance Trust Fund to Promote Technical Cooperation and Assistance in Industrial, Environmental and Raw Materials Management, financed by SIDA	1985	31 December 1993	The Trust Fund continued to finance the follow-up activities to expand the network for industrial environmental management, among them, additional manuals for the environmentally sound management of the pulp and paper industry, and a training package for national workshops on the industry's impact on the water and land, as well as an assessment of the environmental effects of small existing mills.

	Name of Trust Fund	Date established	Expiry date	Action taken in 1991
31.	Technical Assistance Trust Fund for an Integrated Pilot Project on Environmental and Protection of Andean Ecosystems (Cajamarca, Peru), financed by the Government of Germany	1984	31 December 1993	During 1991 the project continued with its aim of improving the living conditions of the farmers in the area of Cajamarca, Peru. The activities of the project involved the preparation of soil and vegetation maps, a micro-climatic survey, a detailed survey of the cultivated herbaceous woody species and wild plants in the area, improvement of agricultural and animal husbandry techniques, reforestation and the promotion of soil conservation measures, as well as the construction of new roads and small-scale irrigation systems.
32.	Technical Cooperation Trust Fund to Provide Experts to UNEP to Assist in the Development and Implementation of Policy Response Options Related to Climate Change, financed by the Government of the Netherlands	1989	31 December 1990	The expert appointed has completed his assignment and activities under the Trust Fund have ceased. The Trust Fund balance will be transferred to a counterpart contribution account to assist developing countries in the participation in negotiations for a climate convention as agreed by both the Government of the Netherlands and UNEP.
33.	Technical Cooperation Trust Fund for the Provision of Junior Professional Officers, financed by the Government of Austria	1990	No fixed date	During 1991, two Junior Professional Officers financed from this Fund were on board, one in the Terrestrial Ecosystems Branch, Nairobi, and the other in the Industry and Environment Office, Paris.
34.	Special Purpose Trust Fund for the Provision of Junior Professional Officers, financed by the Government of Denmark	1981	No fixed date	There were no Junior Professional Officers on board under this Fund in 1991.
35.	Special Purpose Trust Fund for the Provision of Junior Professional Officers, financed by the Government of Germany	1983	No fixed date	During 1991, three Junior Professional Officers were on board, in the Information and Public Affairs Branch, Terrestrial Ecosystems Branch and the Development Planning and Cooperation Unit.
36.	Technical Cooperation Trust Fund for the Provision of Junior Professional Officers, financed	1988	No fixed date	Of the four Junior Professional Officers on board during 1991, one came from a developing country and three from the Netherlands. They worked in the Environmental Management Section, Global Resources Information

	Name of Trust Fund	Date established	Expiry date	Action taken in 1991
	by the Kingdom of the Netherlands			Database (GRID), the Global Environment Monitoring System (GEMS) and in the Caribbean Regional Coordinating Unit.
37.	Technical Cooperation Trust Fund for the Provision of Junior Professional Officers, financed by the Government of Italy	1989	No fixed date	During 1991, two Junior Professional Officers were on board, in the Oceans and Coastal Areas Programme Activity Centre and the Environmental Law and Institutions Unit.
38.	Technical Assistance Trust Fund for the Provision of Junior Professional Officers, financed by the Government of Japan	1985	No fixed date	Of the five Junior Professional Officers on board in 1991, three worked in the Office of the Environment Programme in Nairobi, one in the Regional Office for Asia and the Pacific in Bangkok and one in the Industry and Environment Office in Paris.
39.	Technical Cooperation Trust Fund for the Financing of a Professional Officer, financed by the Government of the Republic of Korea	1990	31 December 1992	One Korean Professional environmental officer was engaged by UNEP during 1991.
40.	Special Purpose Trust Fund for the Provision of Junior Professional Officer, financed by the Government of Norway	1982	No fixed date	During 1991, two Junior Professional Officers were on board, in the Desertification Programme Activity Centre in Nairobi and in the International Register for Potentially Toxic Chemicals in Geneva.
41.	Technical Cooperation Trust Fund for the Provision of Junior Professional Officers, financed by the Government of France	1990	No fixed date	During 1991, one Junior Professional Officer worked in the Global Environment Monitoring System (GEMS).
42.	Technical Cooperation Trust Fund for the Provision of Junior Professional Officers, financed by the Government of Sweden	1988	No fixed date	During 1991, three Junior Professional Officers were on board, in the Environmental Education and Training Unit and Terrestrial Ecosystems Branch in Nairobi and the Global Resource Information Database (GRID) in Geneva.
43.	Technical Cooperation Trust Fund to Assist Developing Countries to	1990	31 December 1992	During 1991 there were very few activities carried out with financing from the Trust Fund as UNEP and the Government of Finland were negotiating on

Name of Trust Fund	Date established	Expiry date	Action taken in 1991
take Action for the Protection of the Ozone Layer under the Vienna Convention and the Montreal Protocol, financed by the Government of Finland			the adjustment of the terms of reference to the Trust Fund in line with the evolution of activities under the Protocol, which they finally and mutually agreed to.
C. Special account			
44. Special Account to finance the implementation of the Plan of Action to Combat Desertification	1979	No fixed date	In accordance with the United Nations General Assembly resolution to conclude the activities under this Special Account, during 1991 UNEP finalized the activities financed by the Special Account. The Special Account will, thus, be closed.

2. Financial status of trust funds and other funds as at 31 december 1991 (United States dollars)

A. General trust funds

	A Opening Balance (1 January 1991)	B Contributions Received	C Interest and Other Miscellaneous Income	D Total Resources (A+B+C)	E Expenditures	F Closing Balance 31 December 1991 (D-E)	G Outstanding Contributions for 1991 and prior years
1. Regional Trust Fund for the Implementation of the Action Plan for the Caribbean Environment Programme	1 606 796	744 306	117 295	2 468 397	957 477	1 510 920	1240 794
2. Trust Fund for the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)	356 494	2 328 716	42 085	2 727 295	2 452 988	274 307	2 332 182
3. Regional Seas Trust Fund for the Eastern African Region	242 952	113 330	21 048	377 330	0	377 330	753 486
4. Regional Trust Fund for the Implementation and Development of the Marine Environment and Coastal Areas of the East Asian Seas	511 510	95 081	33 230	639 821	(543)	640 364	107 189
5. Trust Fund for the Environmental Training Network in Latin America and the Caribbean	(30 112)	71 938	1 403	43 229	63 850	(20 621)	262 048
6. Regional Trust Fund for the Protection and Development of the Marine Environment and Coastal Areas of Bahrain, Iraq, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates	83 507	0	3 650	87 157	1	87 156	0
7. Trust Fund for the Protection of the Mediterranean Sea Against Pollution	3 358 838	1 727 979	272 062	5 358 879	4 422 898	935 981	3 781 613

	A Opening Balance (1 January 1991)	B Contributions Received	C Interest and Other Miscellaneous Income	D Total Resources (A+B+C)	E Expenditures	F Closing Balance 31 December 1991 (D-E)	G Outstanding Contributions for 1991 and prior years
8. Trust Fund for the Interim Multilateral Fund for the Implementation of the Montreal Protocol	665 296	27 005 926	540 614	28 211 836	3 972 456	24 239 380	26 352 888
9. Trust Fund for the Montreal Protocol on Substances that Deplete the Ozone Layer	44 730	2 780 576	91 033	2 916 339	1 818 141	1 098 198	1 230 369
10. Trust Fund for the Convention on the Conservation of Migratory Species of Wild Animals (CMS)	622 869	555 794	52 848	1 231 511	397 546	833 965	454 619
11. Trust Fund for the Purpose of Financing the New International Environment Prize	1 258 126	300 000	94 122	1 652 248	347 354	1 304 894	0
12. United Nations Trust Fund for the Environment Stamp Conservation Fund	43 811	0	2 105	45 916	45 916	0	0
13. Trust Fund for the Vienna Convention for the Protection of the Ozone Layer	291 554	339 167	21 144	651 865	603 969	47 896	183 922
14. Trust Fund for the Protection and Development of the Marine Environment and Coastal Areas of the West and Central African Region	544 933	137 726	53 222	735 881	23	735 858	4 165 292
B. Technical cooperation trust fund							
15. Technical Cooperation Trust Fund to Provide Consultancies to Developing Countries, financed by the Government of Finland	752 537	324 374	58 433	1 135 344	418 262	717 082	0
16. Technical Cooperation Trust Fund for the Financing of Professional Officers, financed by the Government of Finland	363 627	150 036	30 634	544 297	245 054	299 243	0

	A Opening Balance (1 January 1991)	B Contributions Received	C Interest and Other Miscellaneous Income	D Total Resources (A+B+C)	E Expenditures	F Closing Balance 31 December 1991 (D-E)	G Outstanding Contributions for 1991 and prior years
17. Technical Cooperation Trust Fund to Support the Clearing-House Mechanism through Provision of Consultancies on Strategies for Dealing with Serious Environment Problems, financed by the Government of Norway	7 022	0	0	7 022	0	7 022	0
18. Technical Cooperation Trust Fund for Control of Environmental Health Hazards and Promotion of Chemical Safety, financed by the Government of Germany	37 369	0	1 208	38 577	(857)	39 434	0
19. Technical Cooperation Trust Fund for Activities in Developing Countries on Environmental Awareness and Machinery, financed by the Government of Germany	130 970	85 458	11 786	228 214	51 973	176 241	0
20. Technical Cooperation Trust Fund to Provide Experts to the UNEP Ozone Secretariat, financed by the Government of the United States of America	(8 053)	0	261	(7 792)	11 065	(18 857)	0
21. Technical Cooperation Trust Fund for the Provision of a Forestry Officer, financed by the Government of the United States of America	57 790	0	2 422	60 212	47 703	12 509	0
22. Technical Cooperation Trust Fund for the Establishment of a GRID Centre in Arendal, Norway	51 010	681 818	0	732 828	714 243	18 585	0
23. Technical Cooperation Trust Fund for UNEP's Implementation of the Activities Funded by the Global Environment Facility	0	1 000 000	3 224	1 003 224	148 959	854 265	0

	A Opening Balance (1 January 1991)	B Contributions Received	C Interest and Other Miscellaneous Income	D Total Resources (A+B+C)	E Expenditures	F Closing Balance 31 December 1991 (D-E)	G Outstanding Contributions for 1991 and prior years
24. Technical Cooperation Trust Fund to Provide Experts to the UNEP Global Resource Information Database (GRID), financed by the Government of Denmark	73 461	04 27	0	77 731	77 727	4	0
25. Technical Cooperation Trust Fund for UNEP's Implementation of the Activities Funded by the Interim Multilateral Fund Established under the Montreal Protocol	0	1 676 920	24 172	1 701 092	773 310	927 782	0
26. Technical Cooperation Trust Fund to Assist Implementation of the Montreal Protocol on the Substances that Deplete the Ozone Layer in Developing Countries, initially in South-East Asia, financed by SIDA	96 968	496 082	9 263	602 313	295 317	306 996	0
27. INFOTERRA Technical Cooperation Trust Fund, financed by the Government of the United States of America	67 759	116 313	6 353	190 425	44 364	146 061	0
28. Technical Cooperation Trust Fund for the Establishment of the International Environmental Technology Centre in Japan	0	800 000	0	800 000	0	800 000	0
29. Technical Cooperation Trust Fund to Develop and Coordinate the Implementation of the Plan for the Survey, Assessment and Dealing with the Consequences of Environmental Damage Caused by Conflict Between Kuwait and Iraq	0	2 670 750	47 573	2 718 323	2 469 387	248 936	70 979
30. Technical Assistance Trust Fund to Promote Technical Cooperation and Assistance in Industrial, Environmental and Raw Materials Management, financed by SIDA	440 154	0	38 307	478 461	258 917	219 544	439 739

	A Opening Balance (1 January 1991)	B Contributions Received	C Interest and Other Miscellaneous Income	D Total Resources (A+B+C)	E Expenditures	F Closing Balance 31 December 1991 (D-E)	G Outstanding Contributions for 1991 and prior years
31. Technical Assistance Trust Fund for an Integrated Pilot Project on Environmental and Protection of Andean Ecosystems (Cajamarca, Peru), financed by the Government of Germany	256 704	285 182	19 091	560 977	190 674	370 303	0
32. Technical Cooperation Trust Fund to Provide Experts to UNEP to Assist in the Development and Implementation of Policy Response Options Related to Climate Change, financed by the Government of the Netherlands	6 079	0	0	6 079	(51)	6 130	0
33. Technical Cooperation Trust Fund for the Provision of Junior Professional Officers, financed by the Government of Austria	126 690	0	8 243	134 933	122 542	12 391	0
34. Special Purpose Trust Fund for the Provision of Junior Professional Officers, financed by the Government of Denmark	5 861	0	491	6 352	10 449	(4 097)	0
35. Special Purpose Trust Fund for the Provision of Junior Professional Officers, financed by the Government of Germany	211 455	0	13 431	224 886	97 992	126 894	0
36. Technical Cooperation Trust Fund for the Provision of Junior Professional Officers, financed by the Kingdom of the Netherlands	179 573	95 490	10 096	285 159	145 279	139 880	0
37. Technical Cooperation Trust Fund for the Provision of Junior Professional Officers, financed by the Government of Italy	150 550	0	9 405	159 955	92 557	67 398	0
38. Technical Assistance Trust Fund for the Provision of Junior Professional Officers, financed by the Government of Japan	246 070	162 077	22 241	430 388	223 558	206 830	0

	A Opening Balance (1 January 1991)	B Contributions Received	C Interest and Other Miscellaneous Income	D Total Resources (A+B+C)	E Expenditures	F Closing Balance 31 December 1991 (D-E)	G Outstanding Contributions for 1991 and prior years
39. Technical Cooperation Trust Fund for the Financing of a Professional Officer, financed by the Government of the Republic of Korea	8 395	96 468	458	105 321	67 302	38 019	0
40. Special Purpose Trust Fund for the Provision of Junior Professional Officer, financed by the Government of Norway	122 749	0	7 999	130 748	95 863	34 885	0
41. Technical Cooperation Trust Fund for the Provision of Junior Professional Officers, financed by the Government of France	21 043	0	836	21 879	17 134	4 745	0
42. Technical Cooperation Trust Fund for the Provision of Junior Professional Officers, financed by the Government of Sweden	156 856	131 306	9 008	297 170	153 243	143 927	0
43. Technical Cooperation Trust Fund to Assist Developing Countries to take Action for the Protection of the Ozone Layer under the Vienna Convention and the Montreal Protocol, financed by the Government of Finland	1 597 242	0	109 049	1 706 291	22 538	1 683 753	0
C. Special account operated by UNEP							
44. Special Account to finance the implementation of the Plan of Action to Combat Desertification	313 854	5 000	18 653	337 507	337 507	0	10 000
D. Aggregated summaries							
A. General trust funds	9 601 304	36 200 539	1 345 861	47 147 704	15 082 076	32 065 628	40 864 402

	A Opening Balance (1 January 1991)	B Contributions Received	C Interest and Other Miscellaneous Income	D Total Resources (A+B+C)	E Expenditures	F Closing Balance 31 December 1991 (D-E)	G Outstanding Contributions for 1991 and prior years
B. Technical cooperation trust funds	5 159 881	8 772 274	448 254	14 380 409	6 794 504	7 585 905	510 718
C. Special account operated by UNEP	313 854	5 000	18 653	337 507	337 507	0	10 000
D. All trust funds and special account	15 075 039	44 977 813	1 812 768	61 865 620	22 214 087	39 651 533	41 385 120

ANNEX IV

ENVIRONMENT FUND TABLES

1. Contributions paid by country in 1988, 1989, 1990 and 1991 (as at 31 December 1991)
(expressed in United States dollars)

	1988	1989	1990	1991
Argentina	70 000	0	70 000	0
Australia	216 480	273 024	347 520	610 579
Austria	86 972	156 967	449 815	394 379
Bahamas	500	0	0	0
Bahrain	3 500	0	5 250	10 473
Bangladesh	5 082	0	2 541	2 541
Barbados	2 977	1 000	1 350	2 000
Belarus	21 971	21 122	29 585	7 123
Belgium	0	256 848	340 557	594 458
Bhutan	0	0	0	0
Botswana	0	3 727	3 565	8 130
Brazil	40 000	0	0	20 000
Bulgaria	5 882	17 646	20 288	5 249
Burundi	0	0	0	6 195
Canada	913 371	0	945 370	1 914 152
Chad	0	0	2 052	0
Chile	5 000	5 000	0	10 000
China	107 578	129 296	26 406	184 207
Colombia	34 384	35 929	36 846	66 877
Costa Rica	382	422	475	0
Cyprus	2 500	2 500	6 000	3 000
Czechoslovakia	32 823	61 056	31 646	0
Denmark	553 420	486 914	575 678	0
Ecuador	0	0	0	0
Egypt	9 009	8 621	7 782	12 012
Finland	1 217 730	1 385 295	2 130 326	3 191 479
France	0	2 205 955	1 765 766	2 052 174
German Democratic Republic	231 542	210 732	224 697	- *
Germany	2 856 123	2 565 199	5 610 098	6 099 111
Greece	10 000	10 000	12 000	12 000
Guatemala	0	0	0	0
Guinea	0	0	4 974	0
Haiti	0	3 500	0	0
Honduras	0	0	0	0
Hungary	27 702	26 923	27 419	28 800
Iceland	4 500	4 500	4 700	4 900
India	0	150 000	45 021	50 000
Indonesia	12 000	24 000	12 000	12 000
Iran	0	30 000	0	60 000
Ireland	35 218	35 388	85 925	77 400
Italy	849 851	662 364	0	2 694 619

	1988	1989	1990	1991
Jamaica	0	21 719	0	0
Japan	4 750 000	5 000 000	6 896 007	7 100 000
Jordan	10 000	10 000	10 000	10 000
Kenya	22 814	105 735	0	13 295
Kuwait	200 000	0	200 000	0
Lao People's Democratic Republic	0	0	0	0
Lesotho	0	0	0	0
Luxembourg	8 205	8 421	11 537	12 828
Malawi	0	0	0	4 524
Malaysia	20 000	20 000	20 000	20 000
Maldives	0	0	2 500	0
Malta	2 028	4 000	4 000	0
Mauritius	7 086	3 312	4 883	4 617
Mexico	2 234	0	4 591	5 777
Mongolia	2 143	1 000	1 000	1 000
Morocco	30 000	15 000	10 000	0
Nepal	0	3 500	4 725	0
Netherlands	871 856	790 637	1 309 577	1 404 410
New Zealand	62 867	0	59 542	78 976
Nicaragua	0	0	0	500
Niger	0	0	1 988	0
Nigeria	0	80 377	0	0
Norway	1 489 635	1 373 825	2 000 308	3 000 171
Oman	20 000	10 000	0	20 000
Pakistan	0	10 000	0	10 000
Panama	0	0	0	4 000
Papua New Guinea	26 451	0	92	25 388
Philippines	0	5 000	9 655	3 923
Poland	0	0	0	2 036
Portugal	0	5 000	0	0
Qatar	0	0	0	10 000
Republic of Korea	20 000	15 000	15 000	15 000
Romania	0	0	0	0
Rwanda	1 000	0	2 000	0
Saudi Arabia	243 525	250 000	0	499 867
Senegal	2 478	1 825	0	0
Seychelles	100	0	0	0
Singapore	1 000	1 000	1 000	1 000
Somalia	0	0	0	0
Spain	507 546	504 726	593 732	593 077
Sri Lanka	3 500	0	0	0
Swaziland	4 921	1	6 001	6 887
Sweden	2 685 614	2 591 463	2 826 268	3 453 689
Switzerland	1 014 493	900 322	1 198 003	1 767 677
Thailand	0	10 000	20 000	0
Trinidad and Tobago	0	0	2 979	0
Tunisia	10 050	20 360	15 180	5 124
Turkey	9 000	0	0	12 150
Ukraine	54 077	52 016	73 092	17 597

	1988	1989	1990	1991
Union of Soviet Socialist Republics [b]	4 430 387	4 262 910	5 988 360	1 441 759
United Kingdom	2 130 500	4 705 500	5 691 000	6 749 200
United Republic of Tanzania	0	0	8 495	0
United States of America	7 840 000	9 000 000	11 645 597	14 870 002
Uruguay	0	0	20 000	0
Venezuela	57 333	22 022	157 574	68 806
Yemen	4 370	4 370	4 370	5 454
Yugoslavia	0	0	128	476
Zaire	99 144	0	0	5 000
Zambia	985	0	0	0
TOTAL	34 001 839	38 582 969	51 644 836	59 378 068

[a] Through accession of the German Democratic Republic to the Federal Republic of Germany with effect from 3 October 1990, the two German States have united to form one sovereign State. As from the date of unification, the Federal Republic of Germany acts in the United Nations under the designation "Germany".

[b] With effect from 24 December 1991, the membership of the Union of Soviet Socialist Republics in the United Nations, including the Security Council and all other organs and organizations of the United Nations system, is being continued by the Russian Federation.

2. Environment Fund programme: apportionments, allocations, commitments and expenditures, 1990-1991
(expressed in United States dollars)

Programme/subprogramme	APPORTIONMENTS			ALLOCATIONS	COMMITMENTS	EXPENDITURES
	Programme	Supplementary programme	Total			
1. ATMOSPHERE	2 700 000	2 780 000	5 480 000	3 680 000	3 529 444	3 250 145
2. WATER	3 400 000	1 600 000	5 000 000	4 430 000	3 032 447	2 026 447
3. TERRESTRIAL ECOSYSTEMS	11 900 000	3 000 000	14 900 000	15 030 000	13 617 576	11 012 889
3.1 Soils	1 000 000	0	1 000 000	970 000	851 958	777 879
3.2 Arid lands and desertification	6 200 000	1 000 000	7 200 000	6 660 000	6 233 743	5 411 612
3.3 Forests, temperate and mountain ecosystems	1 500 000	0	1 500 000	1 050 000	906 332	747 161
3.4 Agricultural lands and agrochemicals	800 000	0	800 000	500 000	494 836	360 574
3.5 Biological diversity and protected areas	1 450 000	2 000 000	3 450 000	4 900 000	4 331 009	3 098 408
3.6 Microbial resources and related biotechnologies	950 000	0	950 000	950 000	799 699	617 255
4. OCEANS	7 000 000	4 250 000	11 250 000	8 950 000	8 782 837	8 086 246
5. LITHOSPHERE	600 000	0	600 000	600 000	226 835	176 686
6. HUMAN SETTLEMENTS AND THE ENVIRONMENT	1 300 000	0	1 300 000	900 000	243 112	181 480
7. HUMAN HEALTH AND WELFARE	1 500 000	0	1 500 000	1 500 000	1 253 658	1 184 212
7.1 Environmental aspects of communicable diseases	550 000	0	550 000	550 000	297 487	250 925
7.2 Hazards of pollution and working environment	950 000	0	950 000	950 000	956 171	933 287
8. ENERGY,INDUSTRY AND TRANSPORTATION	4 300 000	1 000 000	5 300 000	4 550 000	4 128 144	3 983 669
8.1 Energy and environment	800 000	0	800 000	800 000	546 096	459 457

Programme/subprogramme	APPORTIONMENTS			ALLOCATIONS	COMMITMENTS	EXPENDITURES
	Programme	Supplementary programme	Total			
8.2 Industry, transportation and environment	3 500 000	1 000 000	4 500 000	3 750 000	3 582 048	3 524 212
9. PEACE, SECURITY AND ENVIRONMENT	400 000	0	400 000	400 000	369 042	383 295
10. ENVIRONMENTAL ASSESSMENT	14 800 000	6 120 000	20 920 000	19 470 000	19 125 834	18 053 567
10.1 INFOTERRA	2 000 000	0	2 000 000	2 000 000	1 954 611	1 644 425
10.2 IRPTC	4 500 000	2 000 000	6 500 000	6 150 000	5 879 986	5 727 488
10.3 GRID	2 500 000	2 000 000	4 500 000	3 600 000	3 545 367	3 542 086
10.4 GEMS	5 300 000	1 120 000	6 420 000	6 420 000	6 418 446	6 163 736
10.5 State of the environment	500 000	1 000 000	1 500 000	1 300 000	1 327 424	975 832
11. ENVIRONMENTAL MANAGEMENT MEASURES	3 900 000	4 900 000	8 800 000	8 500 000	7 637 616	5 851 507
11.1 Environment aspects of development planning and cooperation	1 600 000	0	1 600 000	2 000 000	1 108 096	917 659
11.2 Environmental law	2 300 000	4 900 000	7 200 000	6 500 000	6 529 520	4 933 848
12. ENVIRONMENTAL AWARENESS	9 000 000	2 000 000	11 000 000	10 550 000	10 463 394	10 046 072
12.1 Environmental education and training	4 000 000	0	4 000 000	3 440 000	3 347 302	2 909 493
12.2 Public information	5 000 000	2 000 000	7 000 000	7 110 000	7 116 092	7 136 579
13. TECHNICAL AND REGIONAL COOPERATION	7 200 000	9 350 000	16 550 000	9 150 000	8 276 536	7 596 908
TOTAL FUND PROGRAMME ACTIVITIES	68 000 000	35 000 000	103 000 000	87 710 000	80 686 473	71 833 123
FUND PROGRAMME RESERVE	4 000 000	0	4 000 000	4 000 000	3 377 439	2 915 620
GRAND TOTAL	72 000 000	35 000 000	107 000 000	91 710 000	84 063 912	74 748 742

3. Approved commitments by subprogramme and programme element for 1992 and 1993 (as at 31 March 1992)
(expressed in United States dollars)

Subprogramme/programme element	Apportionments*	Commitments		Balance
		1992	1993	
1. ATMOSPHERE	7 000 000	1 793 333	137 326	5 069 341
2. WATER	8 840 000	1 686 394	1 157 622	5 995 984
3. TERRESTRIAL ECOSYSTEMS	20 550 000	5 568 211	1 230 046	13 751 743
3.1 Soils, agricultural lands and agrochemicals	2 500 000	483 442	81 586	1 934 972
3.2 Arid lands and desertification	8 900 000	2 983 212	379 622	5 537 166
3.3 Forests and other ecosystems	3 150 000	526 423	239 018	2 384 559
3.4 Biological diversity	5 200 000	1 499 804	520 530	3 179 666
3.5 Microbial resources and related biotechnologies	800 000	75 330	9 290	715 380
4. OCEANS	11 950 000	2 570 130	154 640	9 225 230
5. LITHOSPHERE	500 000	117 598	5 574	376 828
6. HUMAN SETTLEMENTS AND THE ENVIRONMENT	3 350 000	487 977	207 543	2 654 480
6.1 Environmental aspects of human settlements planning and management	2 100 000	52 382	26 012	2 021 606
6.2 Community preparedness for natural and man-made environmental disasters	1 250 000	435 595	181 531	632 874
7. HUMAN HEALTH AND WELFARE	2 500 000	387 722	165 086	1 947 192
7.1 Hazards of pollution	1 250 000	20 111	15 793	1 214 096

Subprogramme/programme element	Apportionments*	Commitments		Balance
		1992	1993	
7.2 Environmental aspects of human health	1 250 000	367 611	149 293	733 096
8. ENERGY, INDUSTRY AND TRANSPORTATION	10 750 000	3 298 160	255 776	7 196 064
8.1 Energy and environment	1 700 000	258 026	142 438	1 299 536
8.2 Industry and environment	6 600 000	2 220 072	81 752	4 298 176
8.3 Transport and environment	1 250 000	418 171	14 864	816 965
8.4 Tourism and environment	800 000	269 972	11 148	518 880
8.5 Working environment	400 000	131 919	5 574	262 507
9. ENVIRONMENTAL ASSESSMENT	28 050 000	9 086 908	794 756	18 168 336
9.1 Earthwatch co-ordination	750 000	250 000	100 000	400 000
9.2 INFOTERRA	3 300 000	1 102 736	40 876	2 156 388
9.3 IRPTC	8 300 000	2 530 807	102 190	5 667 003
9.4 GRID	5 800 000	1 947 274	72 462	3 780 264
9.5 GEMS	7 900 000	2 533 333	308 474	5 058 193
9.6 State of the environment	2 000 000	722 758	170 754	1 106 488
10. ENVIRONMENTAL MANAGEMENT MEASURES	17 460 000	4 621 887	1 936 968	10 901 145
10.1 Environmental aspects of development planning and cooperation	4 660 000	963 777	635 038	3 061 185
10.2 Environmental law and institutions	12 800 000	3 658 110	1 301 930	7 839 960
11. ENVIRONMENTAL AWARENESS	19 500 000	5 519 924	1 429 590	12 550 486
11.1 Environmental education and training	7 800 000	1 497 876	1 015 666	5 286 458

Subprogramme/programme element	Apportionments*	Commitments 1992	Commitments 1993	Balance
11.2 Public information	11 700 000	4 022 048	413 924	7 264 028
12.TECHNICAL AND REGIONAL COOPERATION	19 550 000	3 749 580	700 740	15 099 680
TOTAL	150 000 000	38 887 824	7 761 743	102 936 509

* As set out in the annex to Governing Council decision 16/23 of 31 May 1991.

ANNEX V

IMPLEMENTATION OF UNEP PROGRAMME 1990-1991

	APPROVED PROJECT
1.1 *Atmospheric composition, processes and air pollution*	
1. Expanded background air pollution network. Scientific assessment, technical advise and information for the development and implementation of legal instruments and guidelines for the control of man-induced pollution of the atmosphere.	FP/4101-88-10 BAPMoN Phase II (WMO) FP/4101-89-03 Climate System Monitoring (WMO)
2. Assessment of ozone layer modification. Reports on technical, environmental and economic implications of ozone layer modifications and emissions control measures. Ozone Layer Bulletin.	FP/9101-87-72 Impact of Climate Variability and Change on Socio-Economic System (Internal)
1.2 *Climate and climatic change*	
1. Analysis of anticipated climate change impacts. Reports and model analysis of strategies, targets and costs of responding to climate change. Intergovernmental Panel on Climate Change.	FP/CP/4102-88-02 Socio-economic impacts and policy responses resulting from climate change (Internal) FP/4102-88-04 Socio-economic impacts and policy responses to climate change in Brazil (SEPLAN-CE - Brazil) FP/4102-89-01 Intergovernmental Panel on Climate Change (Internal)
2. Analysis of anticipated impacts of the climate change on arid and semi-arid areas. Strategies to address drought impacts.	FP/9101-87-72 Impact of Climate Variability and Change on Socio-Economic System (Internal) FP/CP/4102-89-02 Case Studies of Climate Related Impact Assessment in Viet Nam (Resources Env. Center Hanoi)
3. Provision for the work of different policy meetings, technical committees, groups, etc. dealing with different topics of the climate change problem. Second World Climate Conference, network of national climate impact programmes, Scientific advisory committee of WCIP, Advisory Group on	FP/4102-90-02 The Warming of the Earth: Perspectives and Solutions in the Third World (The Woodshole Research Center) FP/9101-89-87 Development and Periodic Review of Environmental Law (Direct)

	APPROVED PROJECT
Greenhouse gases, Working Group on El Niño, etc. Reports and recommendations to Governments on policies relating to climate change.	
4. Activities dealing with climate change are undertaken under several subprogrammes (see subprogrammes 3.1, 3.2, 3.3, 4.1, 4.2, 5.2, 6.1 and 8.1).	FP/9101-88-81 Implementation of the African Programme of Action on the Environment - Phase II (ICSU) FP/9101-88-84 International Geosphere-Biosphere Programme (ICSU) FP/9101-87-62 World Glacier Monitoring (ETH)
2.1 *Water resources and freshwater ecosystems*	
1. Support for preparation and implementation of action plans for Environmental management of Lake Chad Basin.	FP/5201-89-01 Training Course on Lake Management for Specialists from Lake Chad Basin (UNEPCOM) CA/RA/FP/5201-88-81 Implementation of the African Programme of Action on the Environment (Internal)
2. Elements of draft action plans for environmental management of three international water systems and two national water systems.	FP/5201-83-02 Establishment of an Advisory Group in Water Resources and Working Group on Large Scale Water Development Projects (Internal). FP/5201-87-03 Ecologically Sustainable Development of Water and Land Resources in the Mekong Delta (Mekong Committee in assoc. with UNEPCOM). FP/5201-87-06 Development of a Support System for Managing Large International Rivers (IIASA). FP/5201-90-01 Assistance for the Preparation of an Action Plan for the Rehabilitation of the Aral Sea (UNEPCOM/ILEC).
3. 200 professionals from developing countries training on environmentally sound management of water resources. Technical publications, training and public information materials.	FP/5201-87-92 Promotion of Environmentally Sound Management of Lakes (ILEC) FP/5201-89-03 Development of Environmentally Sound Management Strategies in the Humid Tropics (UNESCO). FP/5201-88-84 International Geosphere-Biosphere Programme (IGBP) FP/5201-89-02 Support to the Third Scientific Assembly of the International Association of Hydrological Sciences (IAHS) FP/5201-89-05 Support to the Fourth International Conference on Conservation and Management of Lakes "Hangzhou, 90" (CRAES) FP/5201-87-04 Protection of Transboundary Inland Waters Against Accidental Pollution (ECE) FP/5201-88-83 Further Support to the Steering Committee for the

	APPROVED PROJECT
	Preparation of a Second Edition of the World Conservation Strategy (IUCN) FP/5201-90-02 Supporting Research and Assessment of the Water Climate System in the Amazon Basin under the Impact of Large Scale Land Use Changes (UNESCO) FP/5201-90-03 Development of Human Resources for Environmentally Water Sound Management Phase II (CEFIGRE) FP/9101-90-83 Assessment of Water Resources in the ESCWA Region Using Remote Sensing Techniques (ESCWA)
2.2 *Drinking water supply and sanitation*	
1. Assistance to developing countries in strengthening their institutional capabilities for the provision, maintenance and management of drinking water and sanitation on a sustainable basis. 80 professionals from developing countries trained on drinking water quality control, sanitation and wastewater reuse.	FP/5201-86-02 Interregional Workshop on Hygienic Aspects of Drinking Water Quality Control (WHO/UNEPCOM). FP/5201-88-02 Control of Drinking Water Quality in Rural Areas (WHO) FP/5201-88-03 Guidelines for the Control of Community Based to Motivate and Assist Communities to Provide Themselves with Sufficient Drinking Water and Good Sanitation Facilities on an Environmentally Sound Manner (KHAWO) FP/5201-89-04 Diagnosis of environmental problems of the Lake Xolaton (IRENA)
3.1 *Soils*	
1. Assessment of soil degradation and its impact on soil productivity. Maps at 1:1 million scale with supplements of four African, Asian and Latin American pilot areas. Reports on expected effects of climate change on soil processes.	FP/6101-89-85 Assessment of Land Degradation and Global Soil Changes in a Changing Environment (Internal)
2. Assistance in policy, planning and training. Formulation of sustainable soils policies in five developing countries and implementation in two of them. Evaluation reports and handbooks on soil conservation practices in various environments. 120 trainees in soil degradation assessment, maintenance of tropical soil fertility and land evaluation.	FP/6101-87-91 Support to the Production of the World Resources Report (WRI) FP/6101-88-81 Implementation of the African Programme of Action on the Environment (Internal) FP/6101-88-83 Further Support to the Steering Committee for the Preparation and Promotion of a Second Edition of the World Conservation Strategy (IUCN) FP/6101-88-01 Advisory Services to the Syrian Arab Republic and Uganda on the

	APPROVED PROJECT
	Formulation of National Soils Policies (AGFUND) FP/6101-89-01 Support for the Rehabilitation of the Saline Soils in Euphrates Basin, Syrian Arab Republic (UNEPCOM) FP/6101-89-04 Training in Land Resources Data Collection and Analysis for Land Use Planning in Zambezi River Basin Countries (UNEPCOM) FP/9101-86-96 Training on Production of High Quality Biofertilizer Inoculants (UNEPCOM) FP/6101-80-02 Studies on the impact of agricultural management on the environment (UNEPCOM)
3.2 *Arid lands and desertification*	
1. Coordination of UNEP desertification control programme.	FP/6201-89-01 Desertification Control Programme Activity Centre (Direct)
2. Development of DC-PAC internal Desertification Control Data Base towards a centre of excellence in query-answer capability on major desertification topics.	FP/6201-89-01 Desertification Control Programme Activity Centre (Direct)
3. Global Assessment of desertification.	FP/6201-87-10 Development of a Methodology for Assessment of Desertification in the South Saharan Arid, Semi-Arid and Sub-Humid Ecozones (IGN) (Internal) FP/6201-89-01 Desertification Control programme Activity Centre (Direct) FP/6201-87-04 Desertification Assessment and Mapping, National Pilot Study (DRSRS) FP/6201-87-10 Development of a Methodology for Assessment of Desertification in the South Saharan Arid, Semi-Arid and Sub-Humid Ecozones (Internal) FP/6201-89-85 Assessment of Land Degradation and Global Soil Changes in a Changing Environment (Direct)
4. Assistance to five countries for the implementation of National Plans or Programme of Action to Combat Desertification: one in Africa, two in Asia, two in Latin America. Identification, dissemination and application of appropriate technologies for rehabilitation of arid and semi-arid lands.	FP/6201-89-01 Desertification Control Programme Activity Centre (Direct) FP/6201-82-06 Combating Desertification Through Integrated Agricultural Development in Lodar Area (AGFUND) FP/6201-86-02 Support to African NGOs Network to Combat Desertification (ANEN)

	APPROVED PROJECT
5. Assistance to intergovernmental bodies in (i) strengthening of North African Green Belt; (ii) formulation of programmes for renewable resource conservation in Southern Africa.	CP/RA/FP/6201-88-81 Implementation of the African Programme of Action on the Environment Phase V (Direct) FP/6201-89-01 Desertification Control Programme Activity Centre (Direct)
6. Assistance to 3-4 countries in establishment of village level projects involving popular participation for rational exploitation of natural resources, sustainable production of food, fodder and fuel in semi-arid and sub-humid conditions.	FP/6201-87-13 Field Trial of UNEP Prototype Animal Driven Pumps in Sahelian Conditions (Government of Mali) FP/6201-89-01 Desertification Control Programme Activity Centre (Direct)
7. Support to the development of regional networks for exchange of information, training and research, afforestation and sand-dune stabilization in Latin America, Africa, Asia/Pacific and West Asia.	FP/6201-87-05 Support to West African Countries in Strengthening National Desertification Control Activities Through Research and Training (UNEPCOM) FP/6201-87-07 Support to Regional Research Training and Communication Programme on Desertification Control in West Asia (UNEPCOM) FP/9101-87-99 IIED Sustainable Livelihoods in the Drylands Information Networks (IIED) FP/6201-89-01 Desertification Control Programme Activity Centre (Direct)
8. Training Programme: 400 persons trained in desertification control techniques. Two to four guidelines and handbooks published.	FP/6201-87-05 Support to West African Countries in Strengthening National Desertification Control Activities Through Research and Training (UNEPCOM) FP/6201-87-07 Support to Regional Research Training and Communication Programme on Desertification Control in West Asia (UNEPCOM) FP/6201-89-01 Desertification Control Programme Activity Centre (Direct)
9. Desertification control information activity: *Desertification Control Bulletin* (two issues a year in English and French); preparation and dissemination of other information materials (films, slides, shows, posters, etc.).	FP/6201-89-01 Desertification Control Programme Activity Centre (Direct)
3.3 *Tropical forest and woodland ecosystems*	
1. Assessment of tropical forests. Interaction between climate and forests; bioproductivity of tropical grasslands under increased CO_2 concentration.	FP/6108-88-01 Environment Changes and the Productivity of Tropical Grasslands (King's College London)

	APPROVED PROJECT
2. Development of regional programmes and implementation of pilot projects for sustainable management of tropical forests; one each in Africa, Asia and Latin America and the Caribbean.	CP/RA/FP/9101-88-81 Implementation of the African Programme of Action on the Environment (Internal) FP/9101-90-85 Support to the Implementation of the Forestry Action Plan (Internal) FP/6102-90-85 Technical Cooperation on Environmental Planning and Management in LAC (ECLAC) FP/6102-88-02 Sub-Regional Programme of the National Potential and Sub-Tropical Forests Ecosystems in Central America and Mexico (CATIE)
3. Assistance to Governments to reinforce their national capabilities on conservation of forest ecosystems and *in-situ* conservation of forest genetic resources. Incentive mechanism for the conservation of tropical forest ecosystems.	CP/RA/FP/9101-88-81 Implementation of the African Programme of Action on the Environment (Internal) FP/9101-88-83 Further Support to the Steering Committee for the Preparation of a Record Edition of the World Conservation Strategy (IUCN) FP/6102-87-02 Training in Agroforestry in Arid and Semi-Arid French Speaking Countries in Africa (UNEPCOM) FP/9101-89-87 Development in Periodic Review of Environmental Law (Direct)
3.4 *Temperate and cold zone ecosystems*	
1. Effects of acid rain, on temperate forest ecosystems.	FP/9101-86-95 Assessment and Monitoring of Air Pollution Effects on Forests in the ECE Region (ECE)
3.5 *Mountain and highland ecosystems*	
1. Monitoring of environmental stress and modification of highland ecosystems. Support for the establishment of regional networks for sustainable management of mountain and highland ecosystems.	FP/PA/6103-84-01 Integrated Pilot Project on Environmental Management and the Protection of Andean Ecosystems (Government of Peru) FP/6102-83-01 Application of Integrated Land/Soil Management in Mountain Ecosystems - Preparation of Guidelines (UNEPCOM/ Government of Bulgaria)

3.6 *Biological diversity and protected areas*

	APPROVED PROJECT
1. Promotion of implementation of the World Conservation Strategy and the World Charter for Nature; support for the preparation and adoption of national conservation strategies in at least two countries. Promotion of the ratification and application by Governments of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), the Convention on Migratory Species of Wild Animals (CMS), the Wetlands Convention, The World Heritage Convention and Regional Conservation Conventions. Preparation of a Convention on the Conservation of Biological Diversity.	FP/9101-88-81 Implementation of the African Programme of Action on the Environment (Internal) FP/9101-86-94 Conservation and Management of Plant Genetic Resources and Wild Relations (IBPGR) FP/9101-88-83 Further Support to the Steering Committee for the Preparation and Promotion of a Second Edition of the World Conservation Strategy (IUCN) FP/RA/CT/CP/6105-84-04 Provision for UNEP of the secretariat of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (Direct) FP/9101-89-87 Development and Periodic Review of Environmental Law (Internal) FP/9101-90-87 Support to the Sound Application and Management of Biotechnology (Internal)
2. Improved management of species, habitats, protected areas and wildlife trade; operational biosphere reserves in two more developing countries promoted. Two species action plans and management guidelines prepared. Establishment of one on-site wildlife scheme in sub-saharan Africa for the management and utilization of wildlife resources.	FP/6105-82-01 Regional/Quarterly Bulletin on Wildlife, National Parks and Wildlife and Conservation and Management for Africa (NATURE/FAUNE) FP/6105-84-62 Improving Management of Wildlife and Protected Areas (IUCN) FP/6105-85-01 Wildlands Protected Areas and Wildlife Management in LAC (FAO) FP/6105-90-02 Support for the Assessment of the International Biosphere Reserve Network and for the Further Implementation of the Action Plan on Biosphere Reserves (Governments/UNEPCOM) FP/6105-90-03 Scientific Management of Ecotones in a Changing Environment (SCOPE in association with UNEPCOM)
3. Establishment of an African network for conservation of genetic resources and of regional data banks for animal genetic resources in Africa, Asia, and Latin America and the Caribbean. Information newsletter.	FP/6105-90-01 Conservation and Management of Biological Diversity (IBPGR/IUCN/FAO/Internal/WWF/WRI/UNESCO) FP/6105-90-04 Conservation and Management of Livestock Genetic Diversity(FAO)
4. Training of 100 persons in natural resources management and biological diversity. Training materials and methodologies.	FP/6105-89-01 Training Course for Biosphere Reserve Managers in Anglophone African Countries (UNESCO) FP/6105-89-02 Analysis and Evaluation of the Management of Biological Diversity in Eastern Africa in Relation to Natural Resources Management (ACI)

	APPROVED PROJECT
3.7 *Microbial resources and related biotechnologies*	
1. Support to regional MIRCENs. Pilot applications of sound biotechnologies for increased soil fertility and food production, pest and vector control, waste treatment, degradation of pollutants and environmental management. Training of 100 professionals and technicians in biosafety and application of microbial technologies for environmental management.	FP/9101-83-71 Application of Integrated Land/Soil Management in Mountain Ecosystems. Preparations of Guidelines (Government of Bulgaria/UNEPCOM) FP/6106-87-01 Microbial Technologies for degradation of persistent pollutants (UNEPCOM) FP/9101-86-96 Training in Production and Application of High Quality Biofertilizer inoculants (UNEPCOM) RA/FP/9101-88-81 Implementation of the African Programme of Action on the Environment (Direct, in association with African Governments) FP/6106-83-03 Demonstration Project for Increasing Legume Protein Production in Small Farms Through Biological Nitrogen Fixation (Sudan/AGFUND) FP/9101-90-87 Support to Environmentally Sound Application and Management of Biotechnology (Internal)
2. Monitoring, impact and risk assessment of applications of biotechnology; data bases and report on environmental impact of emerging biotechnologies; guidelines for release of genetically modified and novel organisms.	FP/9101-87-91 Support to the Production of the World Resources Report (WRI in association with IIED)
3.8 *Agricultural lands and agrochemicals*	
1. Monitoring and assessment. Data report on the level and impact of agro-chemicals, pesticides and fertilizers on the environment. Report on the safety of biological control agents.	FP/6104-85-01 Promotion of Appropriate Procedures to Minimize Pesticide Applications for Crop Production in Favour of Non-Chemical Methods and Strategies (FAO) FP/9101-90-87 Support to Environmentally Sound Application and Management of Biotechnology (Internal) FP/9101-87-91 Support to the Production of the World Resources Report (WRI in association with IIED)
2. Integrated pest control for sustainable agriculture and livestock management. Support to the FAO/UNEP panel of experts. Training of 200 persons in various aspects of biological control, sustainable agriculture and livestock development. Preparation of training manuals.	FP/7101-88-04 Training Course on Health Aspects of Pesticide Use (UNEPCOM in association with WHO) FP/6104-87-01 Training for the Production for the Use of Biological Control in Developing Countries (UNEPCOM) FP/6104-85-03 Training for Self Reliance in Ecological Pest Management

	APPROVED PROJECT
	in the Tropics Phase I Africa (ICIPE) FP/6104-91-01 Training Workshops on Safe Handling and Use of Pesticides and Household Chemicals for Leaders of Women's Groups in Selected Countries
4.1 *Regional marine environments*	
1. Coordination of the Oceans and Coastal Areas programme.	FP/5102-86-02 Programme Activity Centre for Ocean and Coastal Areas (Internal) FP/CP/EA/KA/RA/WA/5101-90-03 Support to the Oceans and Coastal Areas Programme of UNEP (OCA/PAC in connection with FAO, IMO, IOC, UNESCO, WMO, ECLAC, UPRSF, ACOPS, IOI, SACEP, CIP, WCMC, IUCN, OAU, SPREP and many others) Annex 1 - General coordination and support Annex 13 - Black Sea Action Plan Annex 14 - North-West pacific Action Plan Annex 15 - UNCED Related Activities
2. *Mediterranean Action Plan*: Meeting of the Contracting Parties to the Barcelona Convention. Protocol on the Protection of the Mediterranean Sea against Pollution Resulting from the Exploration and Exploitation of the Continental Shelf and the Sea-bed and its Sub-soil. Seven national contingency plans and 13 national monitoring programmes prepared; 20 technical reports. Manual on environmental impact assessment, 250 experts trained in subjects relevant to the Action Plan; provision of equipment and technical assistance to participants in the Action Plan. Reports on assessment of pollution by crude oils, zinc, copper, lead, nickel, chromium, selenium, arsenic, phosphorus, detergents and proposed measures.	FP/ME/CA/5102-84-04 Internal Support to the Implementation of MEDPOL Assistance to National Institutions (Internal) FP/ME/CA/CP/5101-89-02 Mediterranean Action Plan 1990-1995 (Internal)
3. *Kuwait Action Plan*: Technical reports resulting from specific project activities; training of experts in subjects relevant to the action plan; guidelines for coastal zone management; environmental impact assessments in the region;	KA/5101-91-01 Environmental Assessment of the ROPME Sub-region and the Introduction of a Rehabilitation Programme following the Iraq/Kuwait conflict. (Internal in association with FAO, IOC, WHO, IAEA, UNCHS, ROPME and Delft Hydraulics)

additional protocols related to the protection of the marine environment and coastal areas in the region.

4. *Caribbean Action Plan*: Intergovernmental Meeting of the Action Plan and Meeting of the Contracting Parties to the Cartagena Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region. 10 national reports on the status of coastal marine resources with recommendations for management including participation in the various networks supported by the Caribbean Environment Programme; two new protocols to the Cartagena Convention adopted on land-based sources of pollution and toxic waste disposal. Protected areas network for the entire region; network on data bases on projects, institutions and experts on subjects of the Action Plan. 100 experts trained in various aspects of research and management of coastal and marine resources; 25 technical reports on Action Plan projects; adoption of the long-term strategy for the Caribbean Environment Programme.

5. *West and Central African Action Plan*: Meeting of the Steering Committee. Updating two national contingency plans; assessment of the critical habitats for the stability of the marine and coastal ecosystems harmonization of national legislation with the Abidjan Convention; strengthening of the network for marine pollution monitoring; areas requiring special protection identified.

6. *Eastern African Action Plan*: Intergovernmental Meeting. Marine pollution research and monitoring programme initiated; continuation of development of contingency plans for maritime emergencies, continuation of development and implementation of

APPROVED PROJECT

KA/5101-90-03 Support to the Oceans and Coastal Areas Programme of UNEP - Annex 6 - Kuwait Action Plan and
Annex 12 - Oil Spill Assessment Activities

FP/CR/JA/CP/5102-86-05 Support for the Regional Coordinating Unit for the Action Plan of the Caribbean Environment Programme (Direct)
FP/CR/5102-87-06 Sub-regional Oil Spill. Contingency Planning in the Wider Caribbean - Phase II (IMO)
FP/CR/5102-87-08 Assessment of Contamination by hydrocarbons and other pollutants in the South-East Waters of the Caribbean Sea (MARN)
FP/CR/5102-88-01 Assessment and Control of Marine Pollution in the Wider Caribbean (IOC/UNESCO)
FP/5102-88-04 Development and Implementation of Common Methodology for the Assessment of the Coastal Water Quality for the Wider Caribbean Region (INDERENA)
FP/CR/5102-89-01 Training, Education and Public Awareness for Environmental Management of Marine and Coastal Resources in the Wider Caribbean (Direct)
FP/CR/5101-90-02 Marine Pollution Assessment and Control Programme for the Wider Caribbean Region (IOC/UNEP)
FP/5101-90-05 The Caribbean Environment Programme: 1990-1995 - CEP Umbrella (CAR/RCU)

FP/WA/5101-89-01 Assessment and Control of Pollution in the Coastal and Marine Environment of the West and Central African Region (WACAF/2 - Phase II) (FAO)

FP/WA/5101-90-03 Support to the Oceans and Coastal Areas Programme of UNEP - Annex 2 - West and Central African Action Plan

FP/5102-82-04 UNEP Support to the Development of an Action Plan for Eastern African Region (Direct)
FP/EA/5102-90-04 Assessment and Control of Pollution in the Coastal and Marine Environment of the Eastern African Region - EAFPOL (EAF/6) (FAO)

	APPROVED PROJECT
management plans for marine and coastal areas, including training of managers.	FP/EA/5101-90-03 Support to the Oceans and Coastal Areas Programme of UNEP - Annex 4 - Eastern African Action Plan
7. *East Asian Seas Action Plan*: Two meetings of the Coordinating Body. Operational cooperative network of pollution monitoring and research institutions established.	FP/ES/5102-82-05 UNEP Support for East Asian Seas Action Plan (Direct) FP/ES/5102-87-03 Development of Management Plans for Endangered Coastal and Marine Living Resources: Training Phase (Government of Malaysia) FP/5101-90-03 Support to the Oceans and Coastal Areas Programme of UNEP - Annex 3 - East Asian Seas Action Plan
8. *Red Sea and Gulf of Aden Action Plan*: Trained experts for participation in national and regional environmental projects; national contingency plans for maritime emergencies; survey of coastal and marine habitats in selected vulnerable areas; establishment of a regional centre in Djibouti for combating oil pollution in case of emergencies in the Gulf of Aden.	FP/5101-90-03 Support to the Oceans and Coastal Areas Programme of UNEP - Annex 7 - Red Sea and Gulf of Aden Action Plan
9. *South Pacific Action Plan*: About 25 technical reports from various projects of the Action Plan; fully operational regional networks of research and training institutions.	FP/9101-87-89 Support to SPREP for Improved Environmental Education, Training and Information in the South Pacific (SPC) FP/CP/9101-91-62 Support to the South Pacific Regional Environment Programme (SPREP)
10. *South-East Pacific Action Plan*: Expanded pollution monitoring programme; national contingency plans to control pollution in cases of emergencies; case-studies on environmental impact assessment; training and intercalibration exercises. Adoption of two protocols on environmental impact assessment and specially protected areas and wildlife.	FP/CP/5102-86-06 UNEP Support to the Implementation of the Action Plan for the South East Pacific (CPPS) FP/CP/5101-90-01 Support to the Implementation of the Action Plan for the Protection of the Marine and Coastal Areas in the South-East Pacific Region (CPPS)
11. *South Asian Seas Action Plan*: Two intergovernmental meetings. Action Plan and convention for South Asian Seas region adopted; implementation of priority projects initiated.	FP/5102-84-01 UNEP Support to the Development of an Action Plan for the South Asian Seas Region (Direct) FP/5102-87-10 Development of a System of Protected Areas in the South Asian Seas (IUCN)
	FP/5101-90-03 Support to the Oceans and Coastal Areas Programme of UNEP - Annex 5 - South Asian Seas Action Plan

12. Meeting of the Committee on Seas of the African Ministerial Conference on the Environment, technical report. Seven interregional seminars; five interregional intercalibration workshops; five interregional courses on analytical techniques for marine pollution studies; five interregional seminars on environmental impact assessment; consultations between secretariats; fifteen global, regional and subject specific directories and bibliographies relevant to oceans and coastal areas.

4.2 *The global marine environment*

1. Global review of the state of the marine environment; formulation of a feasible integrated global ocean monitoring programme; assessment of long-term ecological consequences of low-level marine contaminations; review of carcinogens and nutrients as marine pollutants. Twenty-eight reference methods and three reference materials; reports of the Advisory Group of experts on Methods, Standards and Intercalibration (GEMSI), on Effects of Pollutants (GEEP) and on Standards and Reference Materials (GESREM).

2. Analysis of environmental, sociological and economic effects arising from climatic change and sea-level rise; development of appropriate policy and management options.

4.3 *Living marine resources*

1. Coordination of marine mammals conservation activities world-wide; research and management programme for marine mammals initiated in the Indian Ocean; comprehensive action

APPROVED PROJECT

FP/5102-87-12 Islands Directory (IUCN)
FP/9101-88-83 Further Support to the Steering Committee for the Preparation and Promotion of a Second Edition of the World Conservation Strategy (IUCN)
FP/5102-87-01 Joint IMO/UNEP Seminar on Water Disposal at Sea (IMO, UNEP)
FP/9101-88-84 International Geosphere-Biosphere Programme (ICSU/IGBP)
FP/9101-88-81 Implementation of the African Programme of Action on the Environment - Phase II
FP/5101-90-03 Support to the Oceans and Coastal Areas Programme of UNEP - Annex II - Interregional and Information.

FP/5101-82-01 GESAMP (OCA/PAC in association with FAO, WHO, WMO and IMO)
FP/5102-88-03 Development of New Methodologies and Provision of Comprehensive Technical Support for Regional and Global Marine Pollution Assessments (IAEA)
FP/5101-90-03 Annex VIII - Support to the Oceans and Coastal Areas Programme of UNEP - Annex 8 - Global Assessment

FP/5101-87-01 Global Sentinel Organisms Meeting System (IOC)
FP/9101-91-62 Annex II - Support to the South Pacific Regional Environment Programme (SPREP)
FP/5101-88-01 Regional Changes in Climate in the Mediterranean Basin due to Global Greenhouse Warming (CRU)
FP/5101-90-03 Support to the Oceans and Coastal Areas Programme of UNEP - Annex 9 - Climate Change Related Activities

FP/5101-90-03 Support to the Oceans and Coastal Areas Programme of UNEP - Annex 10 - Support to Living Marine Resources

plan for the protection and management of small cetaceans developed for two of the regional seas programmes.	
5.1 *Lithosphere*	
1. Synthesis report on the qualitative and quantitative aspects of the global phosphorus and sulfur cycles. Two international workshops on the interactions between key bio-geochemical cycles.	FP/6107-87-01 Phosphorus Cycles in Terrestrial and Aquatic Ecosystems and their Interactions with the Cycles of Other Elements (SCOPE) FP/4103-86-01 The Sulphur Cycle in Aquatic Ecosystems and its Interaction with other Biogeochemical Cycles (SCOPE/UNEPCOM) FP/6107-89-02 Compiling Data about the Biogeochemistry of Small Catchments and Setting up a Network of Scientists Researching on this subject (SCOPE) FP/6107-89-03 Particle Flux in the Ocean (SCOPE) FP/6107-88-83 Further Support to the Steering Committee for the Preparation and Promotion of a Second Edition of the World Conservation Strategy (IUCN)
2. Establishment of two demonstration areas in developing countries to apply existing guidelines on (i) Water management and Geo-environment; (ii) Mining and Geo-environment; and (iii) Geology and Land-use Planning.	FP/6107-86-01 Geology and Environment (UNESCO)
6.1 *Human settlements planning and management*	
1. Plan of action on environmental aspects of metropolitan growth and management adopted in 4 related cities. Training of 60 urban managers on environmental aspects of human settlements planning.	FP/7104-89-01 Application of Guidelines on Environmental Health Aspects in Housing and Urban Planning (WHO)
2. Establishment of policy options for four coastal settlements in the context of sea level rise.	Project delayed to 1992-1993 pending selection and approval by authorities in coastal settlements
3. Dissemination of information on environmentally appropriate technologies for air and water pollution and waste water	FP/7104-78-03 Assistance to Capital Development Authority - Dodoma, Tanzania (UNCHS)

	APPROVED PROJECT
handling; application of the UNEP/WHO guidelines on health aspects of human settlements planning in selected countries.	FP/7104-83-01 International Symposium on Solid Waste Management for Developing Countries (Internal) FP/7104-89-01 Application of Guidelines on Environmental Health Aspects in Housing and Urban Planning (WHO) FP/7104-83-03 Training Course in Leakage Detection and Promotion for Municipal Technicians in Japan (The National Water Lake Survey Engineering Association)
4. Promotion of appropriate legislation and regulations reflecting environmental considerations to reduce risk of damage to human settlements from disasters.	No activities implemented in 1990-1991
6.2 *Community preparedness for natural and man-made disasters*	
1. Guidelines on natural disasters reduction. Participation in the International Decade for Natural Disaster Reduction (IDNDR).	Participation in Meetings of the Steering Committee of IDNDR. No Projects developed in 1990-1991
7.1 *Hazards of pollution*	
1. International Programme for Chemical Safety (IPCS). Evaluated information on the hazards of environmental pollutants. Criteria documents, health and safety guides and other critical reviews of priority chemical and physical agents, including mixtures of environmental pollutants and wastes. Training of decision makers, managers and health care workers.	FP/7101-88-02 Protection of the Environment and Human Health Against Dangerous Chemicals - Phase IIIA/Phase IIIB (WHO) FP/9101-88-64 Training Course on Health Aspects of Pesticides Use (UNEPCOM) FP/9101-88-83 Further Support to the Steering Committee for Preparation and Promotion of a Second Edition of the World Conservation Strategy (IUCN)
7.2 *Environmental aspects of communicable diseases*	
1. Panel of Experts on Environmental Management for Vector Control (PEEM). Three pilot demonstration projects; guidelines and publications on environmental management for vector control; 100 persons trained in the design and implementation of ecologically sound vector control.	FP/5201-82-01 WHO/FAO/UNEP Panel of Experts on Environmental Management for Vector and Disease Control (Internal) FP/7101-87-03 Training Course on Water Supply, Sanitation and Health for Environmental Health Officers Working with the Palestinian People (WHO, EMRO)

	APPROVED PROJECT
	FP/9101-88-83 Further Support to the Steering Committee for the Preparation and Promotion of a Second Edition of the World Conservation Strategy (IUCN)
2. Assistance to developing countries for the improvement of national capabilities for environmental management of mycotoxins; 80 persons trained in mycotoxin control.	FP/9101-86-03 Improvement of Migration Control in Tanzania (FAO) FP/9101-87-85 Support to the Second International Conference on Mycotoxins (FAO) FP/9101-87-91 Support to the Production of the World Resources Report (Vol.4 and Vol.5) (WRI)
7.3 *The working environment*	
1. Support to developing countries to strengthen their capacity to design and implement policies and programmes for the improvement of the working environment.	No activity.
8.1 *Energy and environment*	
1. Environmental impacts of energy, including climate change. Guidelines and criteria for environmentally sustainable energy development.	FP/2103-87-03 The Environmental Impacts of Production and Use of Biomass Fuels (SEI) FP/2103-79-01 Comparative Assessment of the Environmental Impacts of Commercial Sources of Energy (Internal)
2. Support to developing countries to strengthen their capacity to integrate environmental considerations into national energy policy, planning and development.	FP/2103-87-02 Seminar on Environmentally Sound Management of Low-grade Fuel (UNEPCOM) CP/RA/FP/9101-88-81 Implementation of the African Programme of Action on the Environment (Internal) FP/2103-88-01 Development of a Computerized Energy Environment Planning System (SEI, USA) FP/CP/2103-90-01 Collaborating Center on Energy and Environment - Phase I (RISO) FP/9101-87-91 Support to the Production of the World Resources Report Vol.4 and Vol.5 (WRI)

	APPROVED PROJECT
8.2 *Industry and environment*	
1. Operation of the Industry and Environment Office. Preparation of Technical guidelines dealing with environmental impacts of several industry sectors, such as pigments, electronics, breweries and distilleries, glass, tourism facilities and services and cross-sectoral issues. Guidelines on management of industrial risk.	FP/CP/2104-86-02 Environmentally-Sound Management of Industry and Transportation (Internal)
2. Assistance to three developing countries in the development of industrial environmental policies. Training for 300 to 350 personnel.	FP/CP/2104-86-02 Environmentally-Sound Management of Industry and Transportation (Internal) FP/2104-89-01 International Training Seminar on Ecologically Sound Methods in Organizing Urban Transportation System (UNEPCOM)
3. Network providing information on low- and non-waste technologies. Network of information on industrial accidents. Quarterly publication of *Industry and Environment* in English and half-yearly summaries in other United Nations Official languages. Improvement of the existing data base to provide information on emissions and quality standards for industry.	FP/CP/2104-86-02 Environmentally-Sound Management of Industry and Transportation (Internal)
8.3 *Transportation*	
1. Information dissemination. Collation of data concerning automotive emission standards.	FP/CP/2104-86-02 Environmentally-Sound Management of Transportation (Internal)
9.1 *Peace, security and the environment*	
1. Further elaboration of the concept of environmental security: principles for the sustainable use of natural resources; case studies; potential for inter-state cooperation in solving environmental problems amongst the relevant States.	FP/8101-88-01 Studies in Environmental Security (PRIO in association with the Univ. for Peace, Costa Rica and the USSR Academy of Science) FP/9101-87-91 Support to the Production of the World Resources Report Vol.3 - in 1990 (WRI)

	APPROVED PROJECT
10.1 *Scientific and technical information*	
INFOTERRA	
1. Operation of INFOTERRA Programme Activity Centre. Provision of referral services to users. Assistance to INFOTERRA focal points; strengthening telecommunications links within INFOTERRA network; training of 20 focal points.	FP/3104-89-01 INFOTERRA Programme Activity Centre (Internal)
2. Provision of on-line access to data banks; improved substantive information from 32 Special Sectoral Sources and eight Regional Service Centres.	FP/3104-89-01 INFOTERRA Programme Activity Centre (Internal)
3. Publications: INFOTERRA International Directory and supplements; INFOTERRA specialized directories; Environmental Experience Exchange series; INFOTERRA Bulletin and bibliographies of selected United Nations documents on the environment.	FP/3104-89-01 INFOTERRA Programme Activity Centre (Internal)
IRPTC	
1. Coordination of global information exchange on chemicals. Preparation and wide dissemination of data profiles and other chemical data; compilations for hazard assessment and risk evaluation of chemicals. Two IRPTC Bulletins per year.	FP/7102-89-02 International Register of Potentially Toxic Chemicals (Internal)
2. Harmonized procedures for information exchange on chemicals, including pesticides; intensified data flow among network partners.	FP/7102-89-02 International Register of Potentially Toxic Chemicals (Internal)
3. Query/response service providing data, documents and advice to Governments, scientific advisors, managers and others involved in hazard assessment, risk evaluation and risk management. Advance warning and policy guidance to Governments, international organizations and others.	FP/7102-89-02 International Register of Potentially Toxic Chemicals (Internal)

	APPROVED PROJECT
4. Implementation of the London Guidelines for the Exchange of Information on Chemicals in International Trade. Coordination of a Global Information Exchange Network of national authorities and operation of a notification scheme for banned and severely restricted chemicals. Support for the Global Convention for the Control of Transboundary Movements of Hazardous Wastes.	FP/9101-86-82 Control of Hazards Posed by Chemicals to Human Health and the Environment (UNEPCOM) FP/7102-89-02 International Register of Potentially Toxic Chemicals (Internal) FP/9101-86-82 Control of Hazards Posed by Chemicals to Human Health (UNEPCOM)
5. Support to developing countries to improve their scientific and institutional capabilities for assessment and control of chemical hazards.	FP/7102-89-02 International Register of Potentially Toxic Chemicals (Internal)
GEMS/GRID	
1. Coordination and management of the global resource data management network. Provision of integrated environmental data sets in digital form; training and assistance to developing countries in the application of Geographic Information System (GIS) technology for solving their environmental problems.	FP/GI/RA/9101-87-96 Development of a Global Resource Information Database (Direct) FP/CE/CP/GI/4106-90-01 Operation and Management of the Global Resource Information Database (Internal)
10.2 *Monitoring and assessment*	
1. Coordination of the Global Environmental Monitoring System (GEMS). Exchange of information for the elaboration of new methods of remote sensing. Harmonized methods for measurement, analysis and management of environmental data to ensure comparability and compatibility.	FP/4101-86-02 Management of the Global Environment Monitoring System (GEMS) Programme Activity Centre - Phase II (Internal) FP/4101-91-02 Strengthening of Environmental Data Development and Management in the USSR (UNEPCOM)
2. Monitoring and assessment of:	
(i) Change in land characteristics due to human activities;	FP/9101-87-91 Support to the Production of the World Resources Report Vol. IV and V (WRI/IIED)
(ii) Risks to human health and well-being from contaminants;	FP/4101-75-03 Air Pollution Monitoring (WMO) FP/4101-76-03 WHO/FAO Joint Food Contamination Monitoring (WHO and FAO)

	APPROVED PROJECT
	FP/4101-78-06 Pilot Project on Assessment of Human Exposure to Pollutants Through 8 Biological Monitoring Development of HEALS (Human Exposure Assessments Locations) FP/4101-76-05 Global Water Quality Monitoring (WHO)
(iii) Status and trends in global production systems (forests, rangeland, agriculture);	FP/4101-88-02 International Symposium on the State of the Art of Remote Sensing Technologies for Biosphere Studies (UNESCO/UNEPCOM)
(iv) Acidic deposition and its effects;	FP/9101-86-95 Assessment and Monitoring of Air Pollution Effects on Forests in the ECE Region (ECE)
(v) Soil degradation of selected pilot areas;	
(vi) Environmental radiation levels;	
(vii) Pollution levels and pathways;	FP/9101-88-84 International Geosphere-Biosphere Programme (ICSU/IGBP)
(viii) Status of species and habitats, protected areas, Wildlife trade, etc.	FP/4101-88-01 The GEMS Monitoring and Assessment Research Centre (MARC) FP/4101-86-02 Management of the Global Environment Monitoring System (GEMS) Programme Activity Centre - Phase II (Internal)
3. Support to developing countries for the establishment of environment and resource monitoring capabilities to provide information for environmental management and land use planning.	FP/9101-90-84 Strengthening Monitoring and Assessment Capabilities in Africa (UNITAR)
4. Preparation of two annual State-of-the-Environment reports and one report on emerging environmental issues.	FP/RA/3105-88-01 Preparation of a book entitled Hazardous Environmental Events (Internal) FP/3105-88-02 The State of the Environment: Achievements in environmental Protection since Stockholm (Internal)
5. Establishment of a data base on national environmental information. Assistance to four Governments for the preparation of national state-of-the-environment reports.	FP/3105-88-03 Establishment of National Environmental Profiles (Internal) FP/3105-90-01 The State of the Environment: Twenty Years After Stockholm (Internal) FP/8201-85-03 The state of the environment in some developing countries (internal)

	APPROVED PROJECT
11.1 *Environmental aspects of development planning and cooperation*	
1. Promotion and application, including assistance to developing countries on request, of policies, procedures, incentives and methods (e.g. environmental impact, social benefit-cost analysis, integrated physical planning, valuation of natural resources and environmental damage) for environmental management.	FP/2101-87-02 Consideration of the Environment in Development Planning in Bhutan - Phase I (Government of Bhutan) FP/2101-85-02 Application of Economic Analysis to Degradation and Rehabilitation of Drylands: Conference Guidelines Case Studies and Training (Government of Australia/DAHE) FP/2101-87-04 Development of Institutional Capabilities in Jamaica: Environmental Management of Hope River Watershed. (Government of Jamaica) FP/2101-88-03 Consideration of the Environment in Development Planning and Administration in Nepal (Government of Nepal/UNDP) FP/9101-87-93 Technical Cooperation for Integration of Environmental Considerations in Projects and Programmes in Latin America and the Caribbean (ECLAC) FP/9101-90-81 Strengthening Environmental Capabilities in South Pacific (SPREP) FP/9101-90-85 Technical Cooperation for Environmental Planning and Management in Latin America and the Caribbean (ECLAC) FP/9101-90-88 Strengthening Environmental Planning and Management Capabilities in Jordan (ESCWA)
2. Support to the United Nations system-wide pilot activity in three selected countries to promote integrating environmental considerations into development plans.	FP/2101-88-04 Planning for Environmentally Sound and Sustainable Development System-Wide Action at the Country Level (Direct)
3. Training and exchange of information: Sixty project analysts, planners and development administrators trained in the use of analytical method, policy instruments and procedures for environmental management; dissemination of training materials.	FP/2101-87-05 Regional Training Seminar on the Application of Environmental Impact Analysis in the Appraisal of Development Projects (University of Padjndjaran) FP/2101-88-02 Arab Expert Workshop on Designing a Regional Training Programme for Integration of Development Planning (A.T.I. Kuwait in Association with the Arabian Gulf Univ., Bahrain) FP/2101-87-03 Workshop on the Application of Methods and Procedures to Integrate Environmental Considerations in Economic Planning and Administration (UNEPCOM)

	APPROVED PROJECT
4. Integration of environmental considerations into development cooperation, trade, international finance and transnational investments; preparation of guidelines, principles, codes of practice and information exchange.	FP/2101-84-01 Integration of Conservation Objectives in Development Projects (IUCN) Demonstration and Guidelines FP/2102-82-03 Secretariat for the Committee of International Development Institutions for the Environment (CIDIE) (Internal)
11.2 *Environmental Law*	
1. Preparatory work for the possible formulation of international legal instruments on:	FP/2105-86-02 Development and Periodic Review of Environmental Law (Montevideo Programme) (Direct)
(i) Chemicals in international trade;	
(ii) Protection of biological diversity;	
(iii) Industrial accidents;	
(iv) Environmental impact assessment.	
2. Support for the implementation and, when needed, revision of approved international legal instruments:	FP/9101-89-02 Interim Secretariat of the Basel Convention on Hazardous Wastes (Direct)
(i) Vienna Convention for the Protection of the Ozone Layer and Montreal Protocol on Substances that Deplete the Ozone Layer;	FP/9101-89-83 Support to the Interim Secretariat for the Implementation of the Vienna Convention and the Montreal Protocol (Internal) FP/9101-89-87 Development of Periodic Review of Environmental Law (Phase III)
(ii) Basel Convention on Control of Transfrontier Movement of Hazardous Wastes;	FP/2105-91-01 Secretariat for the Interim Multilateral Fund Established Under the Montreal Protocol (Direct)
(iii) London Guidelines for the Exchange of Information on Chemicals in International Trade;	RA/VC/MP/VM/2105-89-03 The Secretariat of the Vienna Convention and Montreal Protocol (Direct)
(iv) Other approved guidelines and principles	
3. Technical assistance to at least five developing countries for the improvement of environmental legislation and institution-building.	FP/2105-90-01 Regional Programme on Development of Environmental Legislation and Institutional Framework in Latin America and the Caribbean (Internal)

	APPROVED PROJECT
4. Technical publications and reports:	
(a) Compendium of environmental legislation in CMEA countries;	FP/9101-91-62 Support to the South Pacific Regional Environment Programme. FP/2105-87-01 Environmental Legislation in CMEA Countries (UNEPCOM)
(b) Selected multilateral treaties in the field of environmental law;	
(c) Register of treaties and agreements;	
(d) New directions in environmental legislation;	
(e) Computer Data base of principal government bodies dealing with the environment;	
(f) Implementation of guidelines and principles in the field of environmental law.	
12.1 *Environmental education and training*	
1. *International Environmental Education Programme (IEEP)*: Models of updated curricula for all levels of formal education and for non-formal and adult education; renewed curricula in 30-50 countries which have incorporated Environmental Education into their educational systems; incorporation of Environmental Education into the curricula of 30-50 countries which had not done so by end 1989; associated training for teachers/trainers and administrators. Publication and dissemination of updated and new teaching/learning material, including a compendium of essential concepts, and methodologies.	FP/3101-89-03 IEEP Phase VII - Joint UNESCO-UNEP Programme (UNESCO) FP/9101-87-89 Support to South Pacific Reg. Programme (SPREP) for improved Environmental Education (SPREP) FP/9101-88-81 Implementation of the African Programme of Action on the Environment (Internal)
2. *Training*: 100-200 high-level cadres, decision makers/employers trained through intensive short courses (1 or 2 weeks duration) in planning integrated management of environment and resources; 100-200 middle-level cadres, technicians and scientists trained through 1-2 months - long workshops in integrated management of resources; 100 key personnel from developing countries Governments	FP/9101-87-87 Environmental Awareness Building Workshop for Personnel of African Ministries of Planning Education Industry and the Environment (Internal) FP/3101-89-02 Post Graduate Training in Environmental Management, sub-projects A: Dresden, B: Tufts and C: Malta (UNESCO, Various Universities) FP/3101-89-01 Training Course on Environmental Management for Industrial

	APPROVED PROJECT
trained in 9-12 months post-graduate courses in sustainable management of resources at 3 to 4 selected centres of excellence.	Managers and Engineers (UNEPCOM, UNIDO) FP/3102-87-08 Environmental Management Training for Employers in Selected Developing Countries (ILO) FP/3102-87-06 International Training Course on Geological Aspects of Environmental Protection (UNESCO)
3. *Training Networks*: expanded regional training networks in Latin America and the Caribbean, West-Asia, Asia and the Pacific and Africa for the coordination of training and exchange of information and methodologies.	FP/3102-87-03 Asia/Pacific Network for Tertiary Level Environmental Training (Internal) FP/3102-87-04 West Asian Network for Level Env. Training (Internal)
4. *Publications*: Production, dissemination and evaluation of impact of specialized environmental training manuals; 1 000 copies of each of 10-15 environmental training manuals in various fields of resources management (water, soils, forests, energy, etc.), environmental protection and pollution control in planning the urban, rural and industrial environment.	
12.2 *Public information*	
1. Identification of target audiences; information on the major environmental problems listed in UNEP's target above; co-production of information materials on these issues with other United Nations agencies.	FP/9101-89-82 Coordination of Information and Public Affairs Activities (Internal)
2. Production of (a) *UNEP News* in English, French and Spanish; (b) Publications; (c) Audio-visual materials; (d) information material for World Environmental Day (WED) and other international events. Media support programme for greater coverage of environmental issues by the world's media.	FP/9101-89-82 Coordination of Information and Public Affairs Activities (Internal) FP/3103-88-04 Publication and Information Support Programme in the Republic of China (NEPA) FP/3103-86-10 Publication and Information Support Programme in the USSR - Phase II (UNEPCOM) FP/3103-88-02 Press Foundation of Asia (PFA): Media Programme. FP/3103-87-01 UNEP/IPS Information Programme: Latin America and the Caribbean (IPS) FP/RA/9101-86-93 Support to the Television Trust for the Environment (TVE)

	APPROVED PROJECT
3. Regional information support through Newsletters; environmental clippings; press releases; features; broadcast materials and cooperation with around 10 countries in launching specific information campaigns.	FP/9101-89-82 Coordination of Information and Public Affairs Activities (Internal)
4. Support increased participation of NGOs in the dissemination of information on UNEP and the major environmental problems; coordination of NGOs activities and their inputs to WED events.	FP/3103-89-01 Support to Ecoforum (ELC)
5. Information support to reach different constituencies; parliamentarians, religious groups, youth, women, national environmental committees.	FP/9101-89-82 Coordination of Information and Public Affairs Activities (Internal)
13.1 *Technical and regional cooperation*	
1. Technical assistance and training by UNEP Regional and Liaison Offices.	FP/8201-89-51 Provision of Regional Advisory Services and Fellowships (ROA) FP/8201-89-52 Provision of Regional Advisory Services and Fellowships (ROAP) FP/8201-89-53 Provision of Regional Advisory Services and Fellowships (ROLAC) FP/8201-89-54 Provision of Regional Advisory Services and Fellowships (ROWA) FP/8201-89-55 Provision of Regional Advisory Services and Fellowships (ROE) FP/8201-89-56 Provision of Regional Advisory Services and Fellowships (RONA)
2. Coordination of Technical cooperation among developing countries:	FP/8201-84-01 Strengthening of UNEP's Cooperation with the League of Arab States and the Arab League's Cultural and Scientific Organizations (ALECSO) FP/9101-86-94 Conservation and Management of Plant Genetic Resources and Wild Relatives (IBPGR)
(a) Cairo Programme for African Cooperation;	
(b) Latin American and the Caribbean regional environmental programme;	
(c) Subregional environmental programmes of SACEP, ASEAN and SPREP;	CA/RA/FP/9101-88-81 Implementation of the African Programme of Action on the Environment (Direct) FP/8201-89-07 Action Plan for the Environment in Latin America and the Caribbean (ROLAC)
(d) West Asia region and Plan of Action of the Arab Ministerial Conference on Environment and Development;	FP/9101-86-82 Control of Hazards Posed by Chemicals to Human Health

	APPROVED PROJECT
(e) Environmental programmes of United Nations regional commissions developed in consultation with UNEP regional offices.	and the Environment (UNEPCOM in association with the USSR Ministry of Health) FP/9101-90-83 Assessment of Water Resources by RST in the ESCWA Region (ESCWA) FP/9101-90-84 Strengthening Monitoring and Assessment Capabilities in Africa (UNITAR) FP/9101-90-88 Strengthening Environmental Planning and Management Capabilities (UN-ESCWA in association with the Government of Jordan) FP/8201-90-04 Regional Survey of Production and Consumption of Materials Harmful to the Ozone Layer (ESCWA, NRST Division/ECU) FP/RA/8201-90-07 Support to the Implementation of the Action Plan for the Environment in LAC (Internal)
3. Technical assistance to developing countries in meeting their environmental needs, through Clearing-house.	FP/9101-86-98 Public Lands Demonstration Project Environmental Management of the Hope River Watershed (Government of Jamaica) FP/8201-87-02 Technical Cooperation Trust Fund to Provide Consultancies to Developing Countries Financed by the Government of Finland (Internal)
	EM/CD/CP/8201-89-03 Technical Cooperation to Assess Environmental Problems and to Strengthen Environment Related Policies, Planning and Institutions in Developing Countries (Direct)
13.2 ***Support to the United Nations Sudano-Sahelian Office***	
1. Institutional and programme support to UNSO for assistance, on behalf of UNEP, to the countries of the Sudano-Sahelian region in implementing the Plan of Action to Combat Desertification.	FP/8201-90-06 Programme and Institutional Support to the UN Sudano-Sahelian Office for Assistance to the Countries of the Sudano-Sahelian Region in Implementing the Plan of Action to Combat Desertification - Phase III (UNSO)

UNEP

United Nations Environment Programme

1991 ANNUAL REPORT

of the Executive Director

NAIROBI 1992